

# RanListManager Design

## RanListManager

- An optimization suggestion (**APPROVED**) - instead managing a list of `[]*NbIdentity`, manage a map of `[string]*NbIdentity`, where key is inventoryName and value is the nbIdentity.

### RanListManager

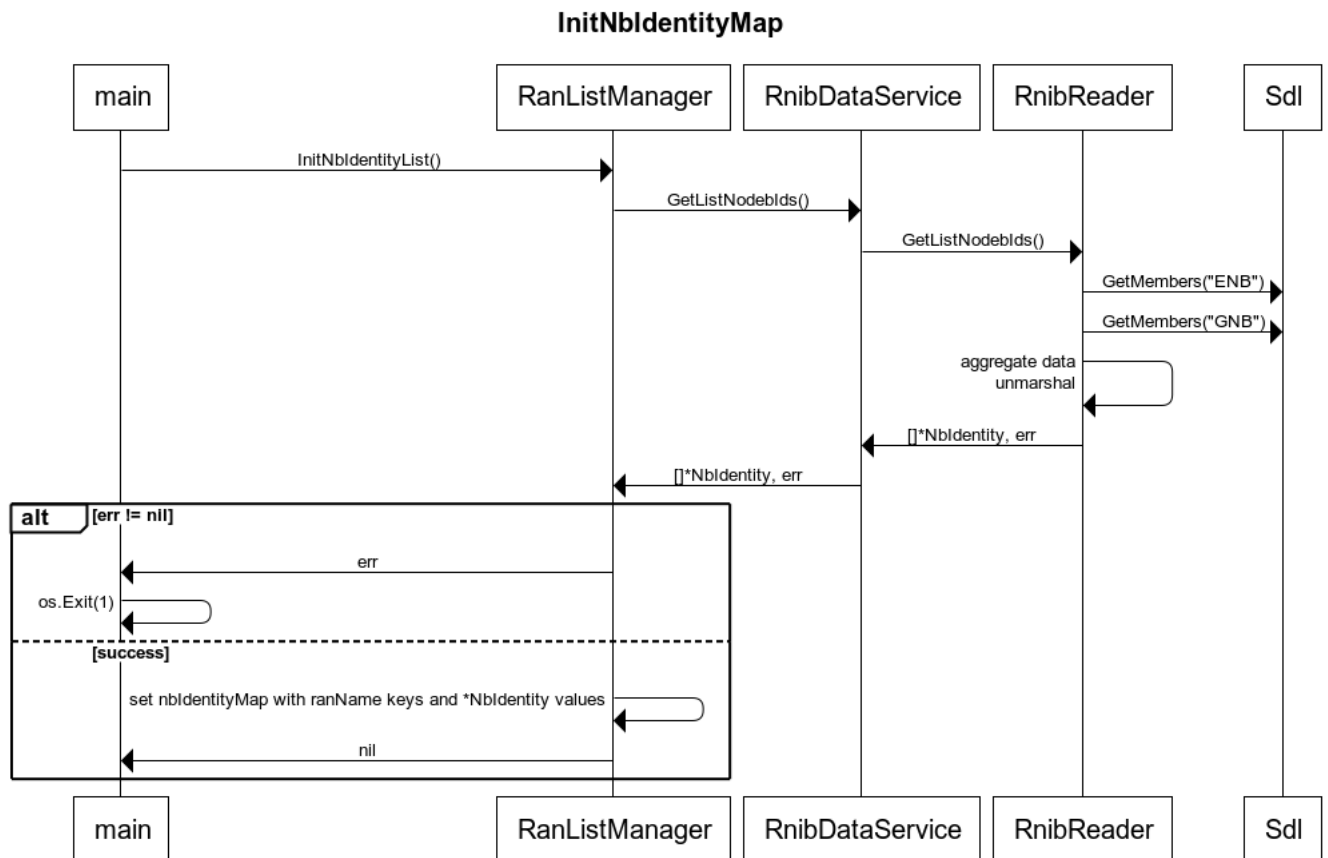
```
type RanListManager struct {
    rnibDataService services.RNibDataService
    mux sync.Mutex
    nbIdentityMap map[string]*NbIdentity
}

type IRanListManager interface {
    InitNbIdentityMap() error
    AddNbIdentity(nodeType entities.Node_Type, nbIdentity *entities.NbIdentity) error
    UpdateNbIdentityConnectionStatus(nodeType entities.Node_Type, ranName string, connectionStatus entities.
ConnectionStatus) error
    RemoveNbIdentity(nodeType entities.Node_Type, ranName string) error
    GetNbIdentityList() []*entities.NbIdentity
}
```

## InitNbIdentityList



- Triggered on **application init**, fetches nb identity list from DB and populate nbIdentityMap data member.
- mib error `os.Exit(1)`



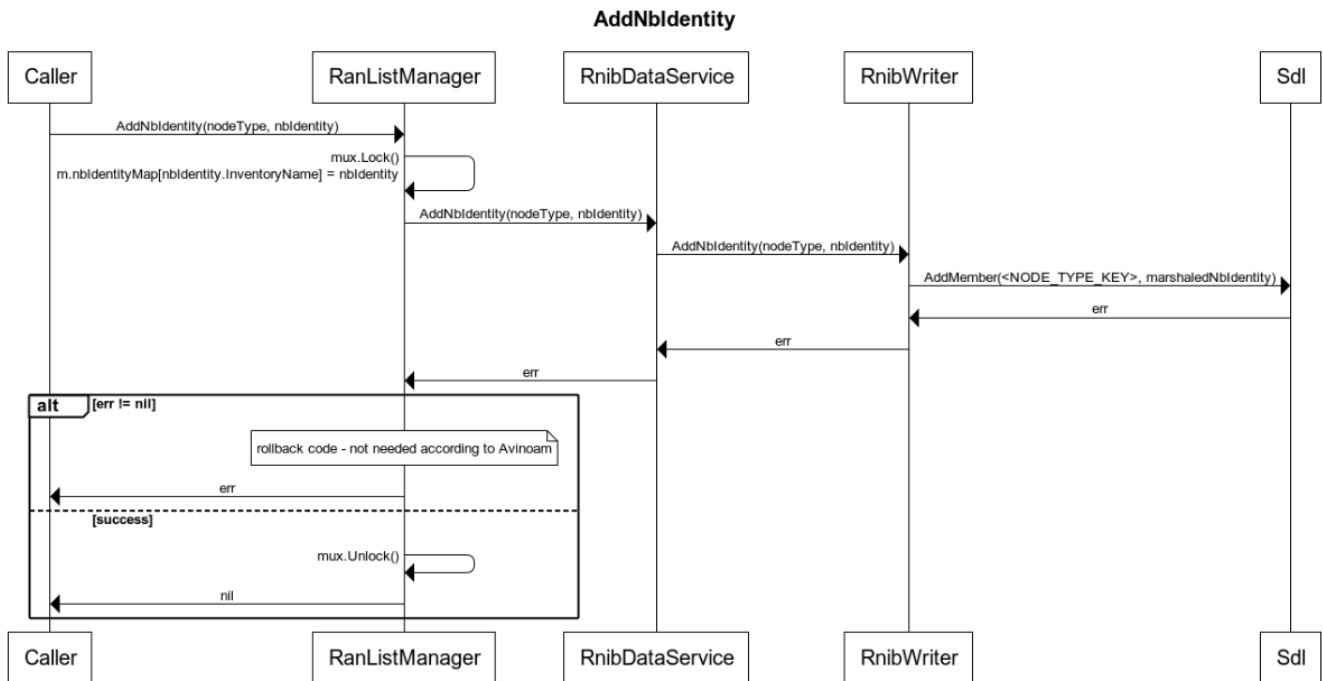
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## AddNbIdentity

**i** *SaveNodeb* Calls will be followed by a *ranListManager.AddNbIdentity(nodeType, nbIdentity)* call.

### AFFECTED FLOWS

- Add Enb REST API
- E2 Setup Request coming from NW

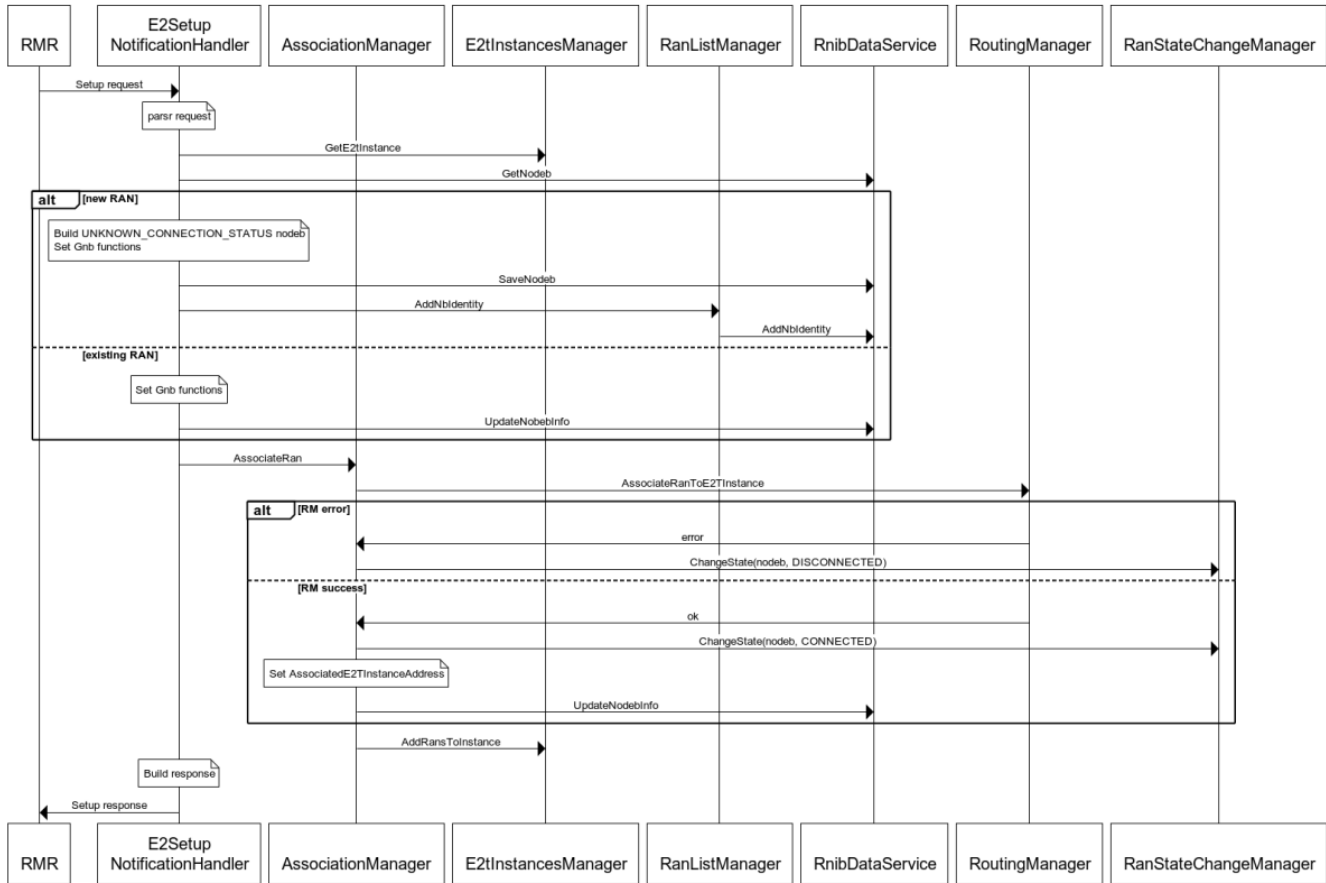


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## Add Enb REST API



## E2 Setup Flow

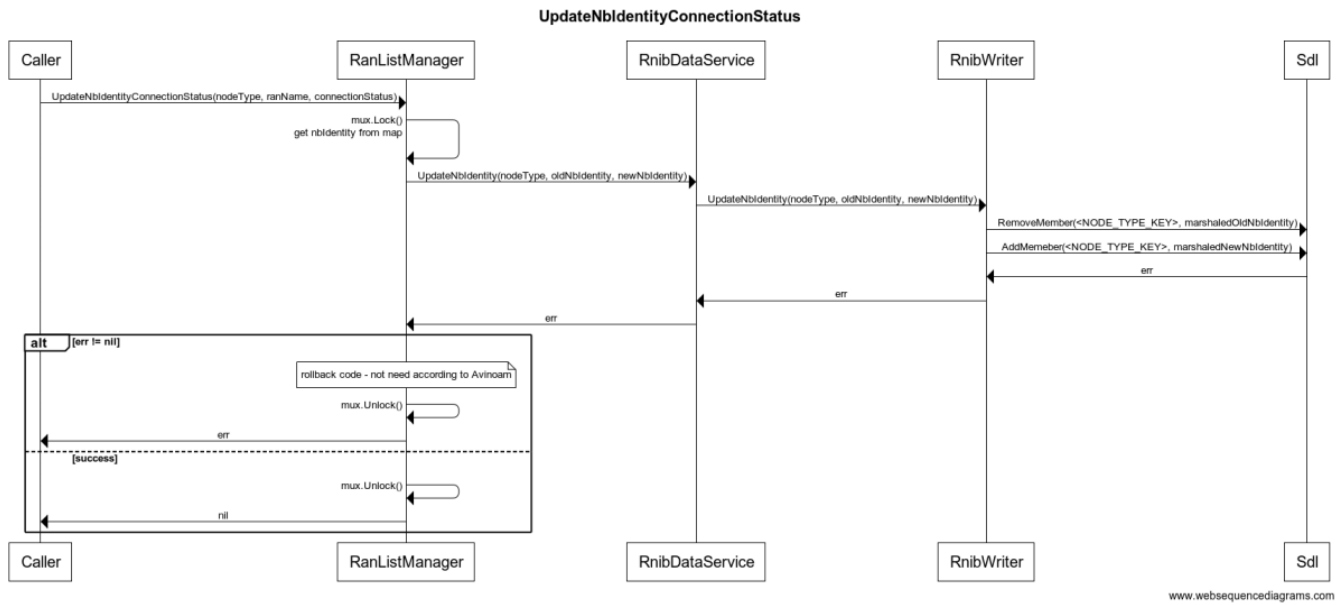


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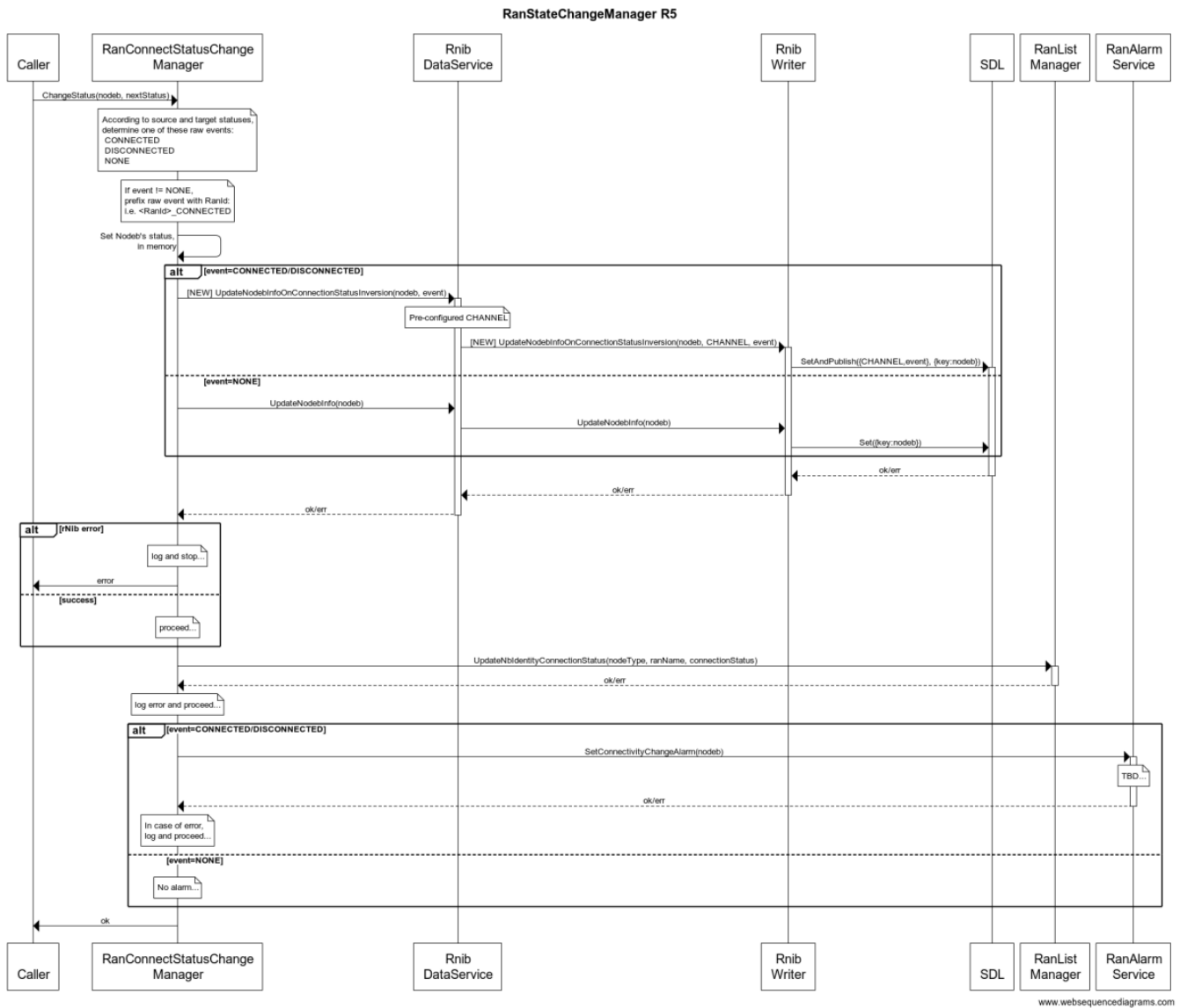
## UpdateNbIdentityConnectionStatus



- Affects the call to `RanStateChangeManager.ChangeStatus` in the following flows: Lost Connection | E2T Init | E2T Shutdown | E2 Setup | Red Button
- Does not affect `Update Enb` since it's always DISCONNECTED



## RanStateChangeManager



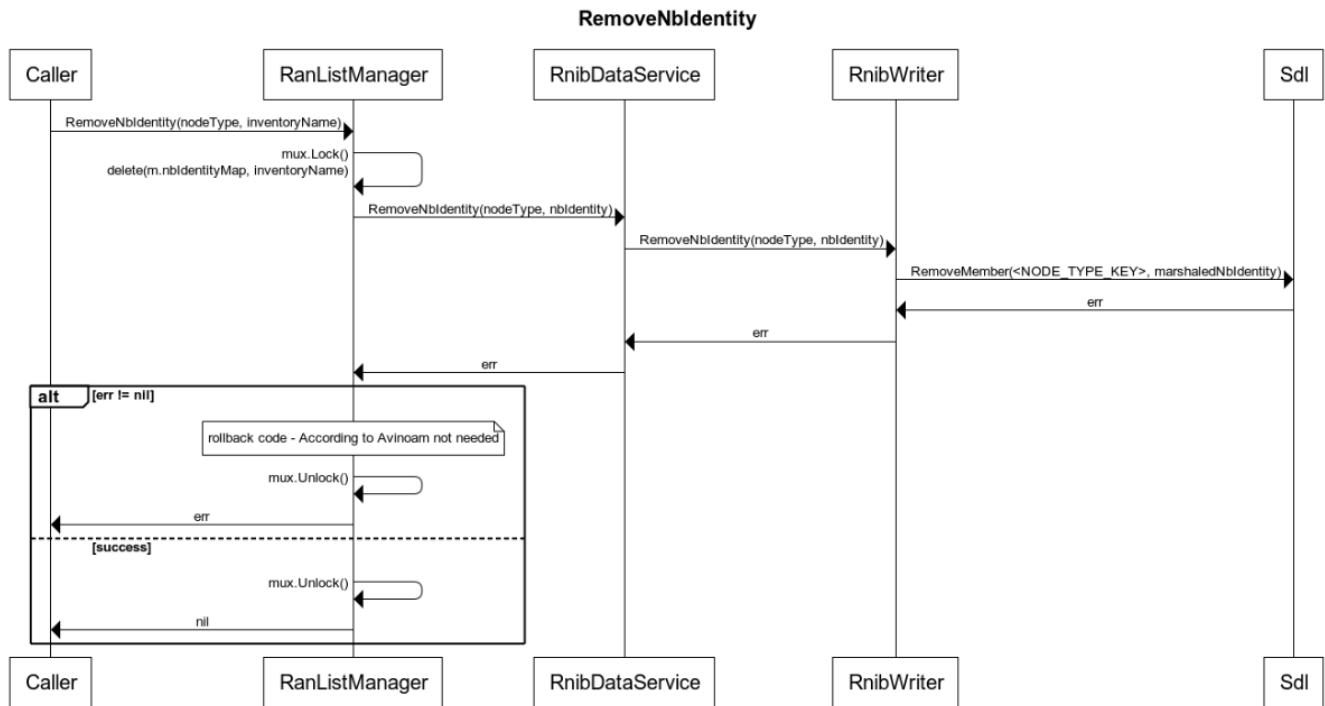
## RemoveNbIdentity



- *RemoveEnb* call will be followed by *ranListManager.RemoveNbIdentity(nodeType, nbIdentity)* call
- Currently, there's no *RemoveGnb* method (there's only *RemoveServedNrCells*)

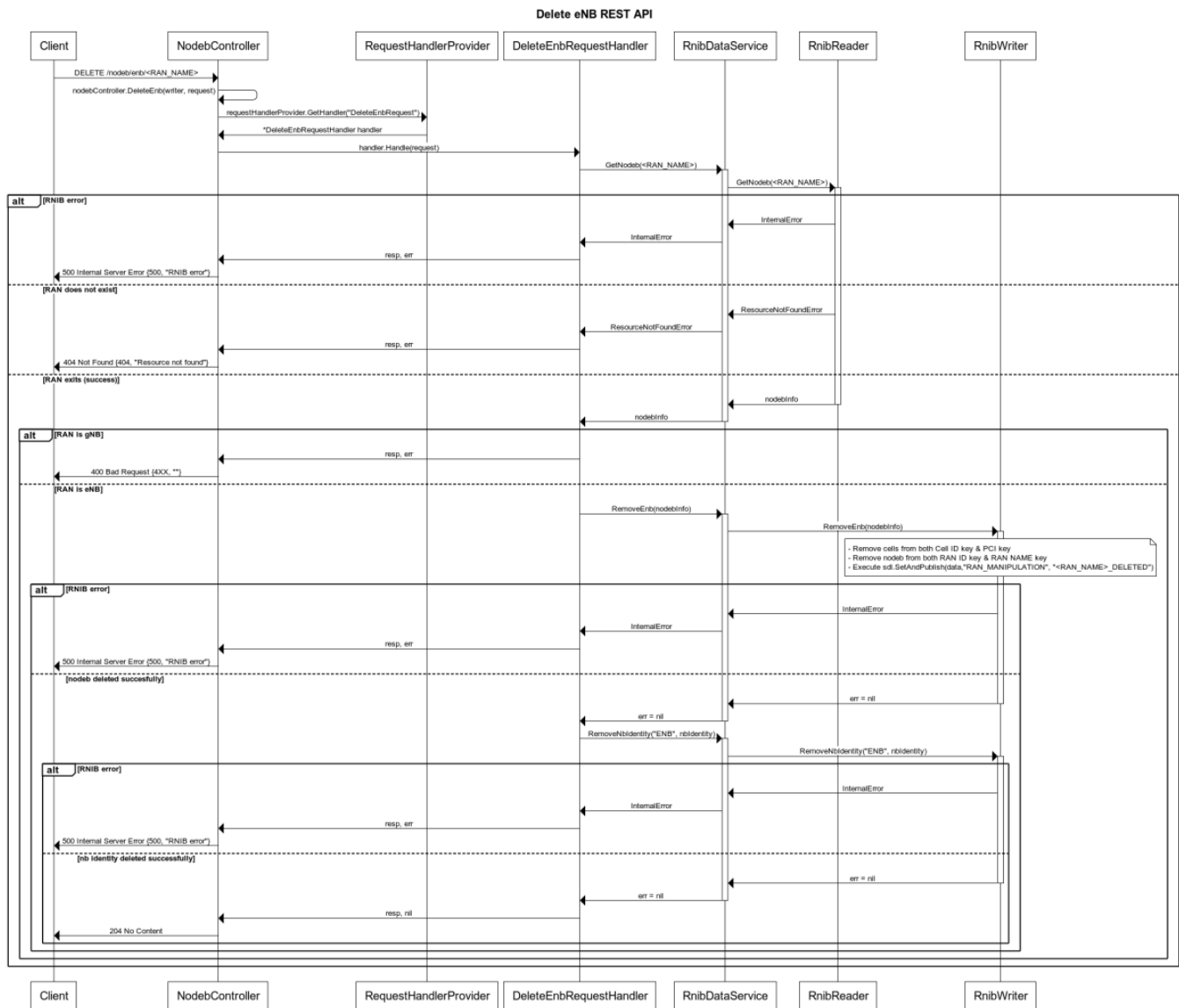
### AFFECTED FLOWS

- Delete Enb REST API



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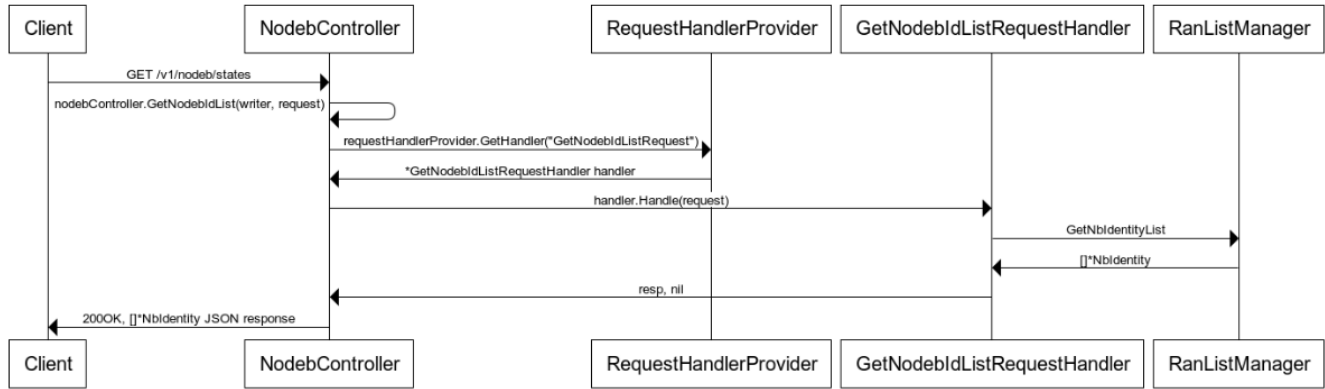
## Delete ENB REST API



## GetNbIdentityList

## Get Nodeb States REST API

### Get Nodeb States REST API

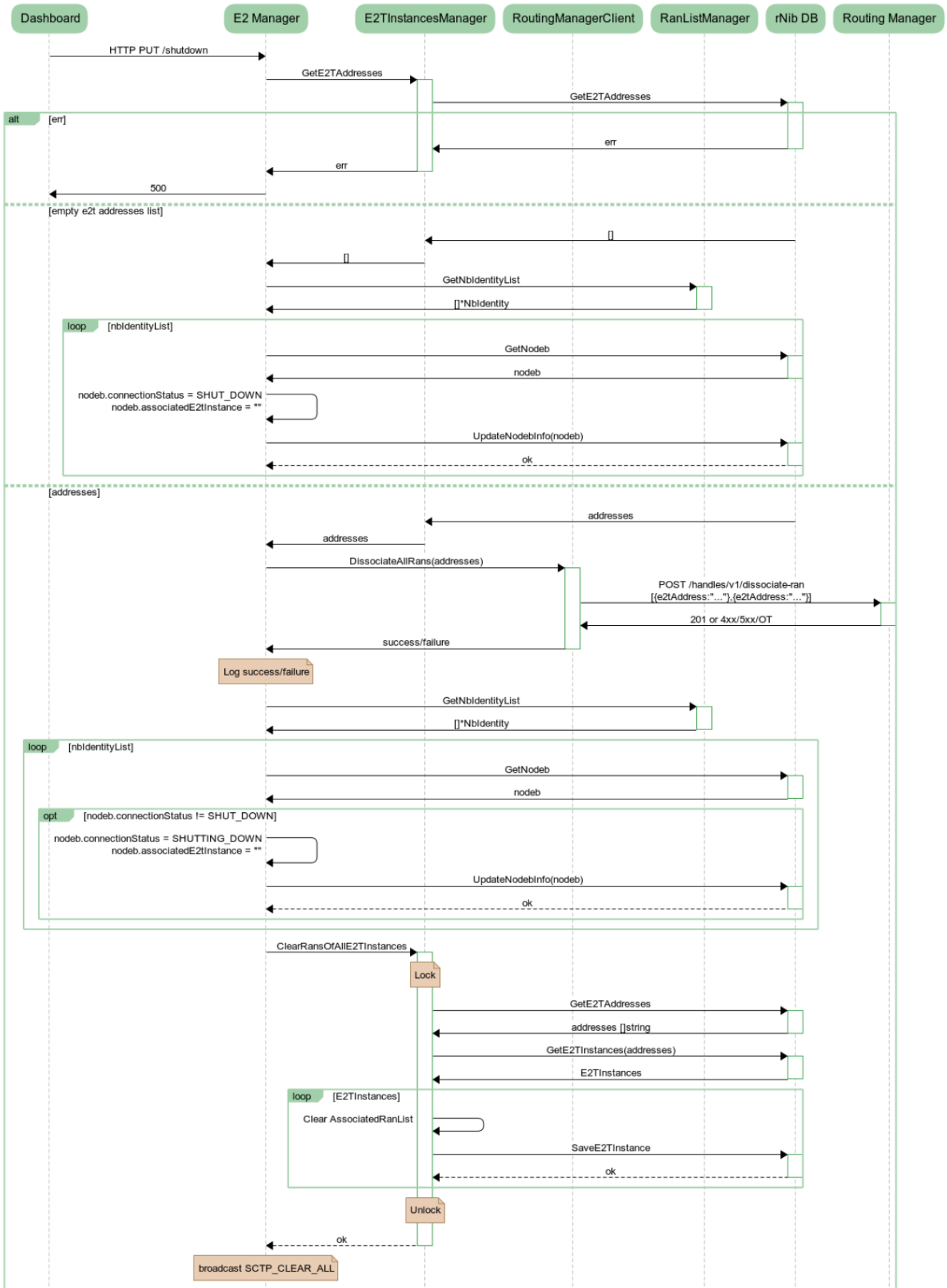


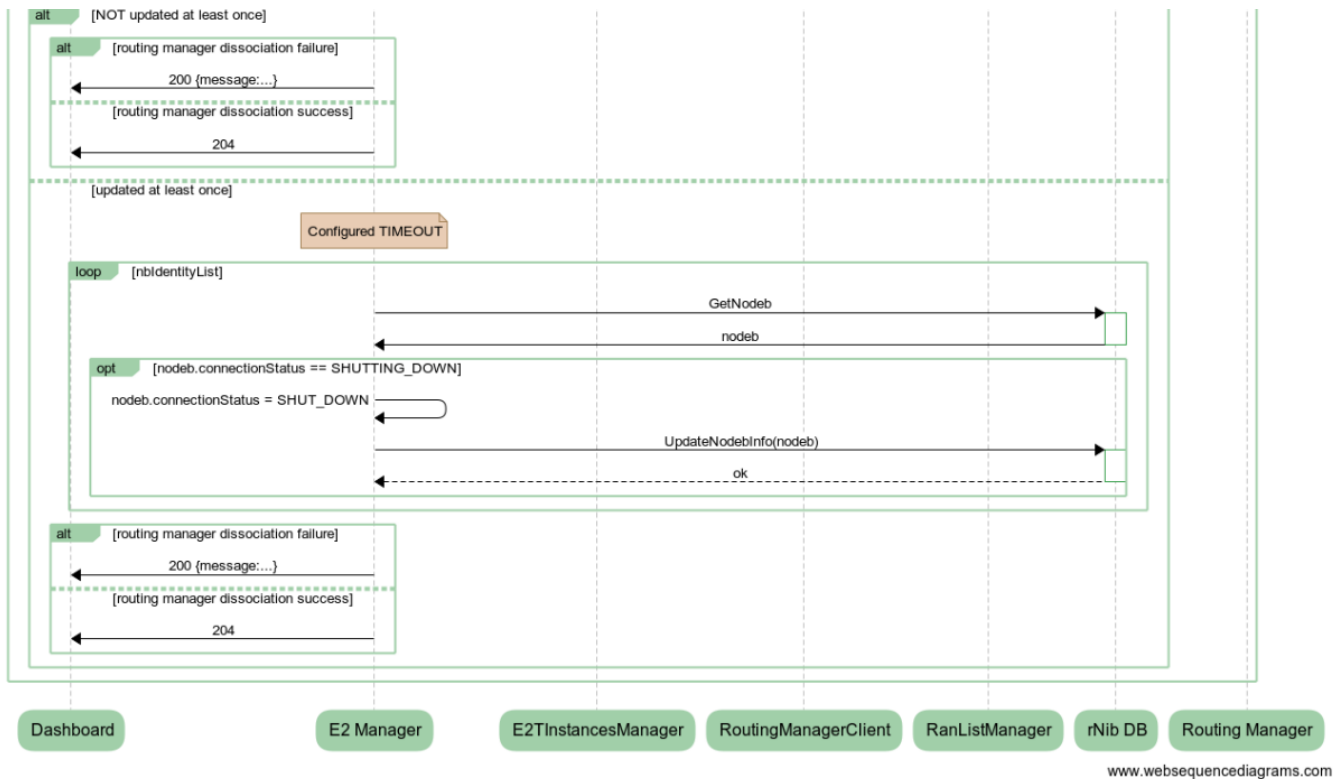
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### Red Button REST API

- Similarly, get nbidentity list from memory instead of DB

# Red Button flow





## RnibWriter Changes

### Modify

We shall modify the following methods:

- SaveNodeb(nbIdentity \*entities.NbIdentity, nodebInfo \*entities.NodebInfo) error
  - Change signature to: SaveNodeb(nodebInfo \*entities.NodebInfo) error
  - Modify implementation:
    - Remove UNKNOWN nodeType handling (reason: setup is now deterministic)
    - Remove save nbIdentity code - it would be called sequentially externally
- RemoveEnb(nodebInfo \*entities.NodebInfo) error
  - Modify implementation:
    - Delete remove nbIdentity code - it would be called sequentially externally

### Add

```

AddNbIdentity(nodeType entities.Node_Type, nbIdentity *entities.NbIdentity) error
UpdateNbIdentities(nodeType entities.Node_Type, oldNbIdentities []*entities.NbIdentity, newNbIdentities []*entities.NbIdentity) error
RemoveNbIdentity(nodeType entities.Node_Type, nbIdentity *entities.NbIdentity) error
  
```

## RnibReader Changes

### Modify

We shall modify the following methods:

- GetListNodebIds() ([]\*entities.NbIdentity, error)
  - Remove UNKNOWN nodeType handling (reason: setup is now deterministic)

## Optimization suggestions

- Instead of managing a **SET** in REDIS DB, manage a **HASH** (read more: <https://redis.io/topics/data-types> | <https://redis.io/topics/memory-optimization>)