1. AIoT Inventory Request

10. AIoT Inventory Response

5. AIoT Registration Request with inventory indication (Task ID, EPC)

6. AIoT Registration Request with inventory indication (EPC)

9. Registration & Authentication procedure in 5GS.

If there exists unregistered device

11. AIoT Inventory Response

NEF

AF

Credential Holder

AMF/AIoT NF

3. The 5GS performs AIoT inventory procedure ( for registered devices ).

7. AIoT Registration Response with inventory result ( inculding TID , default credential and EPC)

2. The NEF performs permission control of the AIoT Inventory request and selection of AMF/AIoT NF. The AMF/AIoT NF checks the registration status of AIoT devices.

2-1. If there are no unregistered devices, after the AIoT inventory procedure finished the AMF/AIoT NF reponses the inventory results to NEF.

2-2. If there exist unregistered devices, the AMF/AIoT NF responses the AIoT inventory results separately for registered devices & unregistered devices or aggregates the inventory results and sends inventory response in step 10.（e.g. based on AF requirement.）

8. AIoT Registration Response with inventory result ( Task ID, TID, default credential and EPC )

4. AIoT Inventory Response

NG-RAN Reader

AIoT device

UDM