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┌────────────────────────────────── MODULE E2T ───────────────────────────────────┐
EXTENDS API

LOCAL INSTANCE Naturals

LOCAL INSTANCE Sequences

LOCAL INSTANCE FiniteSets

CONSTANT Nodes

ASSUME  $\wedge IsFiniteSet(Nodes)$ 
       $\wedge \forall n \in Nodes : n \in \text{STRING}$ 

vars  $\triangleq \langle \rangle$ 

┌────────────────────────────────── MODULE Store ───────────────────────────────────┐
  CreateSubscription(s)  $\triangleq [status \mapsto OK]$ 

  DeleteSubscription(s)  $\triangleq [status \mapsto OK]$ 

  Init  $\triangleq \text{TRUE}$ 

  Next  $\triangleq \text{FALSE}$ 
└──────────────────────────────────┘

LOCAL Store  $\triangleq \text{INSTANCE } Store$ 

┌────────────────────────────────── MODULE NB ───────────────────────────────────┐
  HandleSubscribeRequest(c, m)  $\triangleq$ 
     $\wedge \text{LET } r \triangleq Store!CreateSubscription(m)$ 
    IN  $API!E2T!Server!Send!SubscribeResponse(c, r)$ 
     $\wedge \text{UNCHANGED } \langle \rangle$ 

  HandleUnsubscribeRequest(c, m)  $\triangleq$ 
     $\wedge \text{LET } r \triangleq Store!DeleteSubscription(m)$ 
    IN  $API!E2T!Server!Send!UnsubscribeResponse(c, r)$ 
     $\wedge \text{UNCHANGED } \langle \rangle$ 

  HandleMessage(c, m)  $\triangleq$ 
     $\wedge \vee API!E2T!Server!Receive!SubscribeRequest(c, HandleSubscribeRequest)$ 
     $\vee API!E2T!Server!Receive!UnsubscribeRequest(c, HandleUnsubscribeRequest)$ 
     $\wedge \text{UNCHANGED } \langle \rangle$ 

  Init  $\triangleq$ 
     $\wedge \text{TRUE}$ 
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$Next \triangleq$   
 $\vee \exists s \in Nodes : API!E2T!Server!Serve(s)$   
 $\vee \exists s \in API!E2T!Servers : API!E2T!Server!Stop(s)$   
 $\vee \exists c \in API!E2T!Connections :$   
 $\quad \vee API!E2T!Server!Receive!SubscribeRequest(c, HandleSubscribeRequest)$   
 $\quad \vee API!E2T!Server!Receive!UnsubscribeRequest(c, HandleUnsubscribeRequest)$

LOCAL  $NB \triangleq$  INSTANCE  $NB$

MODULE  $SB$   
 $HandleE2SetupRequest(c, m) \triangleq$   
 $\quad \wedge API!E2AP!Server!Send!E2SetupResponse(c, [status \mapsto OK])$   
 $\quad \wedge UNCHANGED \langle \rangle$   
 $Init \triangleq$   
 $\quad \wedge TRUE$   
 $Next \triangleq$   
 $\quad \vee \exists s \in Nodes : API!E2AP!Server!Serve(s)$   
 $\quad \vee \exists s \in API!E2AP!Servers : API!E2AP!Server!Stop(s)$   
 $\quad \vee \exists c \in API!E2AP!Connections :$   
 $\quad \quad \vee API!E2AP!Server!Receive!E2SetupRequest(c, HandleE2SetupRequest)$

LOCAL  $SB \triangleq$  INSTANCE  $SB$

$Init \triangleq$   
 $\quad \wedge SB!Init$   
 $\quad \wedge NB!Init$   
 $\quad \wedge Store!Init$

$Next \triangleq$   
 $\quad \vee SB!Next$   
 $\quad \vee NB!Next$   
 $\quad \vee Store!Next$

$\backslash$  \* Modification History  
 $\backslash$  \* Last modified *Fri Aug 13 16:35:38 PDT 2021* by *jordanhalterman*  
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