—————————————— MODULE *Topo* ——————————————

EXTENDS *API*

LOCAL INSTANCE *Naturals*

LOCAL INSTANCE *Sequences*

LOCAL INSTANCE *FiniteSets*

CONSTANT *Nodes*

ASSUME $\land$ *IsFiniteSet*(*Nodes*)
       $\land \forall\, n \in Nodes : n \in$ STRING

$vars \triangleq \langle\rangle$

————————————— MODULE *Store* —————————————

$Create(m) \triangleq [status \mapsto OK]$

$Update(m) \triangleq [status \mapsto OK]$

$Delete(m) \triangleq [status \mapsto OK]$

$Get(m) \triangleq [status \mapsto OK]$

$List(m) \triangleq [status \mapsto OK]$

$Watch(m) \triangleq [status \mapsto OK]$

$Init \triangleq$ TRUE

$Next \triangleq$ FALSE

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LOCAL $Store \triangleq$ INSTANCE *Store*

—————————————— MODULE *NB* ——————————————

$HandleCreateRequest(c, m) \triangleq$
    $\land$ LET $r \triangleq Store!Create(m)$
       IN $API!Topo!Server!Send!CreateResponse(c, r)$
    $\land$ UNCHANGED $\langle\rangle$

$HandleUpdateRequest(c, m) \triangleq$
    $\land$ LET $r \triangleq Store!Update(m)$
       IN $API!Topo!Server!Send!UpdateResponse(c, r)$
    $\land$ UNCHANGED $\langle\rangle$

$HandleDeleteRequest(c, m) \triangleq$

$\wedge$ LET $r \triangleq Store!Delete(m)$
    IN $API!Topo!Server!Send!DeleteResponse(c, r)$
$\wedge$ UNCHANGED $\langle\rangle$

$HandleGetRequest(c, m) \triangleq$
    $\wedge$ LET $r \triangleq Store!Get(m)$
      IN $API!Topo!Server!Send!GetResponse(c, r)$
    $\wedge$ UNCHANGED $\langle\rangle$

$HandleListRequest(c, m) \triangleq$
    $\wedge$ LET $r \triangleq Store!List(m)$
      IN $API!Topo!Server!Send!ListResponse(c, r)$
    $\wedge$ UNCHANGED $\langle\rangle$

$HandleWatchRequest(c, m) \triangleq$
    $\wedge$ LET $r \triangleq Store!Watch(m)$
      IN $API!Topo!Server!Send!WatchResponse(c, r)$
    $\wedge$ UNCHANGED $\langle\rangle$

$Init \triangleq$
    $\wedge$ TRUE

$Next \triangleq$
    $\vee \exists s \in Nodes : API!Topo!Server!Serve(s)$
    $\vee \exists s \in API!Topo!Servers : API!Topo!Server!Stop(s)$
    $\vee \exists c \in API!Topo!Connections :$
        $\vee API!Topo!Server!Receive!CreateRequest(c, HandleCreateRequest)$
        $\vee API!Topo!Server!Receive!UpdateRequest(c, HandleUpdateRequest)$
        $\vee API!Topo!Server!Receive!DeleteRequest(c, HandleDeleteRequest)$
        $\vee API!Topo!Server!Receive!GetRequest(c, HandleGetRequest)$
        $\vee API!Topo!Server!Receive!ListRequest(c, HandleListRequest)$
        $\vee API!Topo!Server!Receive!WatchRequest(c, HandleWatchRequest)$

LOCAL $NB \triangleq$ INSTANCE NB

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

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

\ * Modification History
\ * Last modified *Fri Aug* 13 16:35:46 *PDT* 2021 by *jordanhalterman*
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