———————————————— MODULE *xApp* ————————————————

EXTENDS *API*

LOCAL INSTANCE *Naturals*

LOCAL INSTANCE *Sequences*

LOCAL INSTANCE *FiniteSets*

CONSTANT *App*

ASSUME *App* ∈ STRING

CONSTANT *Nodes*

ASSUME ∧ *IsFiniteSet*(*Nodes*)
　　　　∧ ∀ *n* ∈ *Nodes* : *n* ∈ STRING

*vars* ≜ ⟨⟩

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

　*Init* ≜ TRUE

　*Next* ≜ FALSE

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LOCAL *Store* ≜ INSTANCE *Store*

———————————————— MODULE *SB* ————————————————

　*SendSubscribeRequest*(*c*) ≜
　　∧ *API*!*E2T*!*Client*!*Send*!*SubscribeRequest*(*c*, [*foo* ↦ "bar"])

　*HandleSubscribeResponse*(*c*, *m*) ≜
　　∧ UNCHANGED ⟨⟩

　*SendUnsubscribeRequest*(*c*) ≜
　　∧ *API*!*E2T*!*Client*!*Send*!*UnsubscribeRequest*(*c*, [*foo* ↦ "bar"])

　*HandleUnsubscribeResponse*(*c*, *m*) ≜
　　∧ UNCHANGED ⟨⟩

　*Init* ≜
　　∧ TRUE

　*Next* ≜
　　∨ ∃ *n* ∈ *Nodes*, *s* ∈ *API*!*E2T*!*Servers* : *API*!*E2T*!*Client*!*Connect*(*n*, *s*)
　　∨ ∃ *c* ∈ *API*!*E2T*!*Connections* : *API*!*E2T*!*Client*!*Disconnect*(*c*)
　　∨ ∃ *c* ∈ *API*!*E2T*!*Connections* :

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$\lor\ SendSubscribeRequest(c)$
$\lor\ SendUnsubscribeRequest(c)$
$\lor\ API\,!\,E2T\,!\,Client\,!\,Receive\,!\,SubscribeResponse(c,\ HandleSubscribeResponse)$
$\lor\ API\,!\,E2T\,!\,Client\,!\,Receive\,!\,UnsubscribeResponse(c,\ HandleUnsubscribeResponse)$

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LOCAL $SB \;\triangleq\;$ INSTANCE $SB$

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$Init \;\triangleq\;$
$\quad \land\ SB\,!\,Init$
$\quad \land\ Store\,!\,Init$

$Next \;\triangleq\;$
$\quad \lor\ SB\,!\,Next$
$\quad \lor\ Store\,!\,Next$

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\* Modification History
\* Last modified $Fri\ Aug$ 13 16:35:43 $PDT$ 2021 by $jordanhalterman$
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