Plug and Play Wi-Fi Test Results

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Commit:
Several commits (informal)

Test Prefix	Description	Expected Result	Result
Configuration1	Run the DGI using a negative session port.	Exception caught in main during start up: factory-port=-53000: invalid port number: -53000	PASS
Configuration2	Run the DGI using a reserved session port.	Exception caught in main during start up: factory-port=0: reserved port number: 0	PASS
Configuration3	Run the DGI using a session port greater than 65535.	Exception caught in main during start up: factory-port=68000: invalid port number: 68000	PASS
Configuration4	Run the DGI using a non-numeric session port.	Exception caught in main during start up: factory-port=53000wq: invalid port number: 53000wq	PASS
Configuration5	Run the DGI without the session port specified.	Exception caught in main during start up: factory-port not specified in config	PASS
Configuration6	Run the DGI with a single plug and play port.	1 adapter port(s) available.	PASS
Configuration7	Run the DGI with a large number of plug and play ports.	12345 adapter port(s) available.	PASS
Configuration8	Run the DGI with an inverted plug and play port range.	Exception caught in main during start up: adapter-port=54010:54000: invalid range	PASS

Test Prefix	Description	Expected Result	Result
Configuration9	Run the DGI using a negative plug and play port.	Exception caught in main during start up: adapter-port=-54010:-54000: invalid port number: -54010	PASS
Configuration10	Run the DGI using a reserved plug and play port.	Exception caught in main during start up: adapter-port=0:10: reserved port number: 0	PASS
Configuration11	Run the DGI using a plug and play port greater than 65535.	Exception caught in main during start up: adapter-port=68000:68007: invalid port number: 68000	PASS
Configuration12	Run the DGI using a non-numeric plug and play port.	Exception caught in main during start up: adapter-port=54000:54010i: invalid port number: 54010i	PASS
Configuration13	Run the DGI without the start of the plug and play port range.	Exception caught in main during start up: adapter-port=:54010: received empty string for a port number	PASS
Configuration14	Run the DGI without the end of the plug and play port range.	Exception caught in main during start up: adapter-port=54000:: received empty string for a port number	PASS
Configuration15	Run the DGI with an empty plug and play port range.	Exception caught in main during start up: adapter-port=:: received empty string for a port number	PASS
Configuration16	Run the DGI with the same value for the start and end of the plug and play port range.	1 adapter port(s) available.	PASS
Configuration17	Run the DGI without a plug and play port specified.	Plug and play devices disabled.	PASS
Configuration18	Run the DGI with multiple plug and play port ranges.	11 adapter port(s) available.	PASS

Test Prefix	Description	Expected Result	Result
Configuration19	Run the DGI with multiple plug and play port ranges that overlap.	Duplicate adapter port: 54005	PASS
Configuration20	Run the DGI with the lone plug and play port the same as the session port.	Rejected client: No available port numbers for new adapter.	PASS
Configuration21	Run the DGI with the first plug and play port the same as the session port.	Port already used: 53000	PASS
BasicOperation1	Detect a single plug and play device.	SST (0) → 0.0 SST (1) → 5.0	PASS
BasicOperation2	Remove a plug and play device that has gone off-line.	SST (0) → 0.0 SST (1) → 5.0 SST (0) → 0.0	PASS
BasicOperation3	Change the value of a plug and play device at run time.	SST (0) → 0.0 SST (1) → 5.0 SST (1) → 10.0	PASS
BasicOperation4	Detect two devices of the same type with the correct → value.	SST (0) → 0.0 SST (2) → 12.0	PASS
BasicOperation5	Detect two devices of different types with the correct values.	LOAD (0) → 0.0 ; SST (0) → 0.0 LOAD (1) → 42.0 ; SST (1) → 5.0	PASS
BasicOperation6	Remove the first of two SST devices.	SST (0) → 0.0 SST (2) → 12.0 SST (1) → 7.0	PASS

Test Prefix	Description	Expected Result	Result
BasicOperation7	Remove the second of two SST devices.	SST (0) → 0.0 SST (2) → 12.0 SST (1) → 5.0	PASS
BasicOperation8	Remove a device other than the SST.	LOAD (0) → 0.0 ; SST (0) → 0.0 LOAD (1) → 42.0 ; SST (1) → 5.0 LOAD (0) → 0.0 ; SST (1) → 5.0	PASS
BasicOperation9	Change the value of one of several SST devices.	SST (0) → 0.0 SST (2) → 12.0 SST (2) → 17.0	PASS
BasicOperation10	Change the value of the a non-SST device.	LOAD (0) → 0.0 ; SST (0) → 0.0 LOAD (1) → 42.0 ; SST (1) → 5.0 LOAD (1) → 24.0 ; SST (1) → 5.0	PASS
BasicOperation11	Handle a large number of devices at once.	DRER (0) → 0.0 ; DESD (0) → 0.0 ; LOAD (0) → 0.0 ; SST (0) → 0.0 DRER (3) → 111.0 ; DESD (1) → 10.0 ; LOAD (1) → 42.0 ; SST (2) → 12.0	PASS
BasicOperation12	Change the value of a large number of devices.	DRER (0) → 0.0 ; DESD (0) → 0.0 ; LOAD (0) → 0.0 ; SST (0) → 0.0 DRER (2) → 39.0 ; DESD (1) → 10.0 ; LOAD (1) → 42.0 ; SST (1) → 5.0 DRER (2) → 49.0 ; DESD (1) → 10.0; LOAD (1) → 42.0 ; SST (1) → 10.0	PASS
Failure1	DieHorribly before sending the DGI device states.	Removing an adapter due to timeout	FAIL[1]
Failure2	DieHorribly before sending states and then restart.	SST (0) → 0.0 SST (1) → 5.0	FAIL[2]

[1]terminate called after throwing Boost error code
[2]terminate called after throwing Boost error code

Test Prefix	Description	Expected Result	Result
Failure3	DieHorribly after sending the DGI device states.	SST (0) → 0.0 SST (1) → 5.0 SST (0) → 0.0	PASS
Failure4	DieHorribly after sending the device states and restart instantly.	SST (0) → 0.0 SST (1) → 5.0	FAIL[3]
Failure5	DieHorribly after sending the device states and restart after a delay.	SST (0) → 0.0 SST (1) → 5.0 SST (0) → 0.0 SST (1) → 5.0	PASS
Failure6A	DGI loses Wi-Fi before receiving device states.	Removing an adapter due to timeout	FAIL[4]
Failure6B	Controller loses Wi-Fi before sending the DGI device states.	Removing an adapter due to timeout	FAIL[5]
Failure7A	DGI loses Wi-Fi before sending states and then regains it.	SST (0) → 0.0 SST (1) → 5.0	FAIL[6]
Failure7B	Controller loses Wi-Fi before sending states and then regains it.	SST (0) → 0.0 SST (1) → 5.0	FAIL[7]
Failure8A	DGI loses Wi-Fi after receiving device states.	SST (0) → 0.0 SST (1) → 5.0 SST (0) → 0.0	PASS

[3]Device is briefly lost
[4]terminate called after throwing Boost error code
[5]terminate called after throwing Boost error code
[6]terminate called after throwing Boost error code
[7]terminate called after throwing Boost error code

Test Prefix	Description	Expected Result	Result
Failure8B	Controller loses Wi-Fi after sending the DGI device states.	SST (0) → 0.0 SST (1) → 5.0 SST (0) → 0.0	PASS
Failure9A	DGI loses Wi-Fi after receiving device states and regains it instantly.	SST (0) → 0.0 SST (1) → 5.0	PASS
Failure9B	Controller loses Wi-Fi after sending device states and regains it instantly.	SST (0) → 0.0 SST (1) → 5.0	
Failure10A	DGI loses Wi-Fi after receiving device states and regains it after a delay.	SST (0) → 0.0 SST (1) → 5.0 SST (0) → 0.0 SST (1) → 5.0	FAIL[8]
Failure10B	Controller loses Wi-Fi after sending device states and regains it after a delay.	SST (0) → 0.0 SST (1) → 5.0 SST (0) → 0.0 SST (1) → 5.0	PASS
UnexpectedError1	Send an unrecognized device type to the DGI.	Rejected client: Unknown device type: SST	PASS
UnexpectedError2	Send an unrecognized signal type to the DGI.	Corrupt state: Unknown device signal: TestController:SST1 gateawy	PASS
UnexpectedError3	Send a corrupt state value to the DGI.	Corrupt state: received non-numeric value	PASS

[8]terminate called after throwing Boost error code

Test Prefix	Description	Expected Result	Result
UnexpectedError4	Have the same controller specify the same device twice.	Rejected client: The device TestController:SST1 already exists.	FAIL[9]
UnexpectedError5	Have the same controller start two simultaneous sessions.	Rejected client: Duplicate session for TestController	PASS
UnexpectedError6	The DGI adapter factory receives a packet with a header it does not recognize	BadRequest from DGI	FAIL[10]
UnexpectedError7	The DGI adapter receives a packet with a header it does not recognize	BadRequest from DGI	FAIL[11]
UnexpectedError8	The DGI adapter factory receives a packet containing a lone Hello command with the wrong delimiter	BadRequest from DGI	FAIL[12]
UnexpectedError9	The DGI adapter factory receives a packet containing a lone Hello command followed by nonsense data	BadRequest from DGI	FAIL[13]
UnexpectedError10	The DGI adapter factory receives a packet containing nonsense data	BadRequest from DGI	FAIL[14]

[9] terminate called after throwing Boost error code
[10] terminate called after throwing Boost error code
[11] The DGI fails to send a BadRequest
[12] terminate called after throwing Boost error code
[13] terminate called after throwing Boost error code
[14] terminate called after throwing Boost error code

Test Prefix	Description	Expected Result	Result
UnexpectedError11	The DGI adapter receives a packet containing a lone command with the wrong delimiter	BadRequest from DGI	FAIL[15]
UnexpectedError12	The DGI adapter receives a packet containing a lone command with the wrong delimiter follwed by nonsense data	BadRequest from DGI	FAIL[16]
UnexpectedError13	The DGI adapter receives a packet containing a series of commands with the wrong delimiters	BadRequest from DGI	FAIL[17]
UnexpectedError14	The DGI adapter receives a packet containing nonsense data	BadRequest from DGI	FAIL[18]
MultipleControllers1	Have two controllers use the same device type with different names.	SST (0) → 0.0 ... SST (2) → 12.0	PASS
MultipleControllers2	Have two controllers use the same device type with identical names.	SST (0) → 0.0 ... SST (2) → 12.0	PASS
MultipleControllers3	Have two controllers use different device types.	LOAD (0) → 0.0 ; SST (0) → 0.0 ... LOAD (1) → 42.0 ; SST (1) → 5.0	PASS

[15]The DGI fails to send a BadRequest
[16]The DGI fails to send a BadRequest
[17]The DGI fails to send a BadRequest
[18]The DGI fails to send a BadRequest

Test Prefix	Description	Expected Result	Result
MultipleControllers4	Remove the first of two controllers connected to the DGI.	LOAD (0) → 0.0 ; SST (0) → 0.0 ... LOAD (1) → 42.0 ; SST (1) → 5.0 LOAD (1) → 42.0 ; SST (0) → 0.0	PASS
MultipleControllers5	Remove the second of two controllers connected to the DGI.	LOAD (0) ; SST (0) → 0.0 → 0.0 ... LOAD (1) → 42.0 ; SST (1) → 5.0 LOAD (0) → 0.0 ; SST (1) → 5.0	PASS
MultipleControllers6	Change the device value of a controller connected to the DGI.	SST (0) → 0.0 ... SST (2) → 12.0 SST (2) → 17.0	PASS
MultipleControllers7	Use a large number of controllers to connect at once.	DRER (0) → 0.0 ; DESD (0) → 0.0 ; LOAD (0) → 0.0 ; SST (0) → 0.0 ... DRER (3) → 111.0 ; DESD (1) → 10.0 ; LOAD (1) → 42.0 ; SST (2) → 12.0 ... DRER (3) → 121.0 ; DESD (1) → 10.0 ; LOAD (1) → 42.0 ; SST (2) → 17.0	PASS
MultipleControllers8	Have insufficient port numbers to accept all controllers.	Rejected client: No available port numbers for new adapter.	PASS
MultipleControllers9	Have insufficient port numbers but have controller timeout.	SST (0) → 0.0 ... SST (1) → 5.0 ... SST (1) → 7.0	PASS
MultipleDGI1	Have two DGI converge to a positive normal value.	SST (0) → 0.0 ... SST (1) → 20.0 SST (0) → 0.0 ... SST (1) → 20.0	FAIL[19]

[19]Normal remains 20 after controllers disconnect

Test Prefix	Description	Expected Result		Result
MultipleDGI2	Have two DGI converge to a negative normal value.	SST (0) → 0.0 ... SST (1) → -5.0	SST (0) → 0.0 ... SST (1) → -5.0	FAIL[20]
MultipleDGI3	Have the normal value change during convergence.	SST (0) → 0.0 ... SST (1) → -3.0 ... SST (1) → -6.0	SST (0) → 0.0 ... SST (1) → -3.0 ... SST (1) → -6.0	FAIL[21]
MultipleDGI4	Have one DGI lose its devices during convergence.	SST (0) → 0.0 ... SST (1) < 250.0	SST (0) → 0.0 ... SST (0) → 0.0	FAIL[22]
MultipleDGI5	Have one DGI with no attached devices.	SST (0) → 0.0 ... SST (1) → 10.0	SST (0) → 0.0	PASS[23]

[20] Normal remains -5 after controllers disconnect
[21] Normal remains -6 after controllers disconnect
[22] Normal remains -5 after controllers disconnect
[23] Only works if started from clean state