Plug and Play Test Results

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Test Prefix	Description	Expected Result	Result
Configuration1	Run the DGI using a negative session port.	Exception caught in main: factory-port=-3000: invalid port number: -3000	PASS
Configuration2	Run the DGI using a reserved session port.	Exception caught in main: factory-port=0: reserved port number: 0	PASS
Configuration3	Run the DGI using a session port greater than 65535.	Exception caught in main: factory-port=68000: invalid port number: 68000	PASS
Configuration4	Run the DGI using a non-numeric session port.	Exception caught in main: factory-port=3000wq: invalid port number: 3000wq	PASS
Configuration5	Run the DGI without the session port specified.	Exception caught in main: 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.	36011 adapter port(s) available.	PASS
Configuration8	Run the DGI with an inverted plug and play port range.	Exception caught in main: adapter-port=4010:4000: invalid range	PASS
Configuration9	Run the DGI using a negative plug and play port.	Exception caught in main: adapter-port=-4010:-4000: invalid port number: -4010	PASS
Configuration10	Run the DGI using a reserved plug and play port.	Exception caught in main: 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: 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: adapter-port=4000:4010i: invalid port number: 4010i	PASS

Test Prefix	Description	Expected Result	Result
Configuration13	Run the DGI without the start of the plug and play port range.	Exception caught in main: adapter-port=:4010: 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: adapter-port=4000:: received empty string for a port number	PASS
Configuration15	Run the DGI with an empty plug and play port range.	Exception caught in main: 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
Configuration19	Run the DGI with multiple plug and play port ranges that overlap.	Duplicate adapter port: 4005	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.	FAIL[1]
Configuration21	Run the DGI with the first plug and play port the same as the session port.	Port already used: 3000	FAIL[2]
BasicOperation1	Detect a single plug and play device.	SST (0) $\rightarrow$ 0.0 SST (1) $\rightarrow$ 5.0	PASS
BasicOperation2	Remove a plug and play device that has gone off-line.	SST (0) $\rightarrow$ 0.0 SST (1) $\rightarrow$ 5.0 SST (0) $\rightarrow$ 0.0	PASS
BasicOperation3	Change the value of a plug and play device at run time.	SST (0) $\rightarrow$ 0.0 SST (1) $\rightarrow$ 5.0 SST (1) $\rightarrow$ 10.0	PASS
BasicOperation4	Detect two devices of the same type with the correct $\rightarrow$ value.	SST (0) $\rightarrow$ 0.0 SST (2) $\rightarrow$ 12.0	PASS

[1]The DGI exits with the wrong error message: Address already in use.
[2]The DGI exits due to an exception that should not have been thrown: Address already in use.

Test Prefix	Description	Expected Result	Result
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
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	Fail before sending the DGI device states.	test case incomplete	
Failure2	Fail before sending states and then restart.	test case incomplete	
Failure3	Fail after sending the DGI device states.	SST (0) → 0.0 SST (1) → 5.0 SST (0) → 0.0	PASS
Failure4	Fail after sending the device states and restart instantly.	SST (0) → 0.0 SST (1) → 5.0	FAIL[3]
Failure5	Fail 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

[3]There is a short period during which the device does not exist.

Test Prefix	Description	Expected Result	Result
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
UnexpectedError4	Have the same controller specify the same device twice.	Rejected client: The device TestController:SST1 already exists.	PASS
UnexpectedError5	Have the same controller start two simultaneous sessions.	Rejected client: Duplicate session for TestController	PASS
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
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

Test Prefix	Description	Expected Result		Result
MultipleControllers8	Have insufficient port numbers to accept all controllers.	test case incomplete		
MultipleControllers9	Have insufficient port numbers but have controllers timeout.	test case incomplete		
MultipleDGI1	Have two DGI converge to a positive normal value.	SST (0) $\rightarrow$ 0.0 ... SST (1) $\rightarrow$ 20.0	SST (0) $\rightarrow$ 0.0 ... SST (1) $\rightarrow$ 20.0	PASS
MultipleDGI2	Have two DGI converge to a negative normal value.	SST (0) $\rightarrow$ 0.0 ... SST (1) $\rightarrow$ -5.0	SST (0) $\rightarrow$ 0.0 ... SST (1) $\rightarrow$ -5.0	PASS
MultipleDGI3	Have the normal value change during convergence.	SST (0) $\rightarrow$ 0.0 ... SST (1) $\rightarrow$ -3.0 ... SST (1) $\rightarrow$ -6.0	SST (0) $\rightarrow$ 0.0 ... SST (1) $\rightarrow$ -3.0 ... SST (1) $\rightarrow$ -6.0	PASS
MultipleDGI4	Have one DGI lose its devices during convergence.	SST (0) $\rightarrow$ 0.0 ... SST (1) $<$ 250.0	SST (0) $\rightarrow$ 0.0 ... SST (0) $\rightarrow$ 0.0	PASS
MultipleDGI5	Have one DGI with no attached devices.	SST (0) $\rightarrow$ 0.0 ... SST (1) $\rightarrow$ 10.0	SST (0) $\rightarrow$ 0.0	PASS