TEST 1:

Purpose	Scenario	Expected Result	Notes
Demonstrate the capability of DGI: *Modules interact with each other to produce the expected result*.	Initiation* SST 1: Supply SST 2: Demand SST 3: Supply -20, 10, -20 are the initial SST power levels respectively	Power migrations take place till the DGIs converge.	The DGIs form a group; corresponding LB modules compute relative Normal once SC returns the global state. LB triggers power migration steps accordingly.

TEST 2:

Purpose	Scenario	Expected Result	Notes
Demonstrate the capability of LB and SC modules: *New Normal is computed based on dynamic values of SSTs and convergence of DGI power levels is achieved*.	Initiation* SST 1: Supply SST 2: Demand SST 3: Supply -20, 10, -20 are the initial SST power levels respectively; use the sliders to change these power levels during a run Change to: 10, -15, 15 respectively	Observe that SSTs 1 & 3 stop to "Supply" while SST 2 starts to "Supply". The DGIs converge to the new computed normal where no more power migrations are possible.	Significant change in computed Normal relative to initial settings, forcing a change in Demand state of the SSTs.

* Initially, the Demand states are based relative to Normal =0 till the time SC module first returns the global state to LB and new Normal is computed.

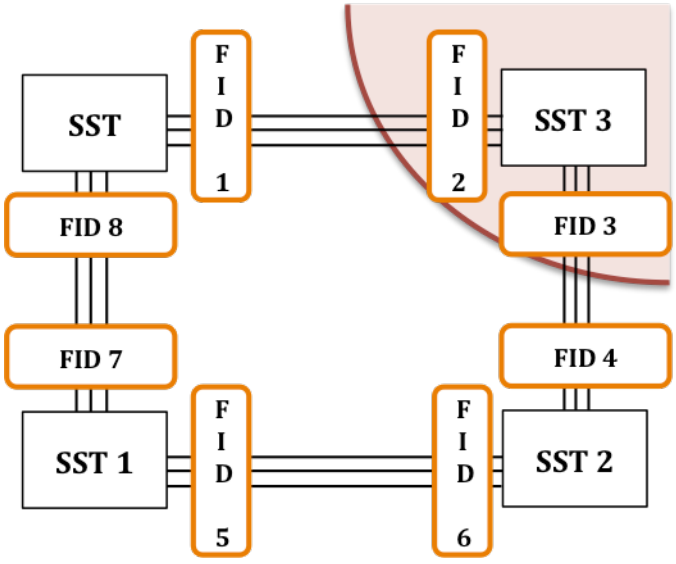
TEST 3:

Purpose	Scenario	Expected Result	Notes
Demonstrate the capability of DGI in case of group reconfiguration: *New group is formed with an elected leader and power migrations are based on the demand of the nodes with in this new group*.	Initiation* SST 1: Supply SST 2: Demand SST 3: Supply -20, 10, -20 are the initial SST power levels respectively; a) Kill DGI process of a non-leader node (say, SST 3) and restart it after sometime. b) Kill DGI process of a leader node (say, SST 1) and restart it after sometime.	a) The group reorganizes with the failed/killed node removed. Power migrations if any, from this killed node cease. Once it comes back online, it should be included in the group and power migrations from this node can be seen again. b) A new group is formed and power migrations from the previous leader cease. When the previous leader rejoins the group, it involves in power balancing again.	The current setup of DGI is such that, the activity of the modules is restricted to members in the group. Leader of a group is responsible for initiation of SC and new Normal computation.

* Initially, the Demand states are based relative to Normal =0 till the time SC module first returns the global state to LB and new Normal is computed.

TEST 4:

Purpose	Scenario	Expected Result	Notes
Demonstrate the capability of DGI responding to FIDs' status in case of faults: *FIDs broadcast their status (open or closed) to the DGI to force it to recognize that SST is reconnected*	Initiation* SST 1: Supply SST 2: Demand SST 3: Supply -20, 10, -20 are the initial SST power levels respectively; 8 FIDs, each send up/down to leader. FIDs 2 and 3 send down status	Isolate SST3	Currently faults (detected by FIDs) are simulated by killing a DGI process similar to Test 3 above.



* Initially, the Demand states are based relative to Normal =0 till the time SC module first returns the global state to LB and new Normal is computed.