EPIC dataset

"EPIC dataset" contains operational data collected from the EPIC testbed at iTrust. This dataset consists of eight scenarios under normal operating conditions. Data was collected for 30 minutes of operation under each scenario. Sensor and actuator data was collected and stored as a CSV file; the network traffic was saved in 'pcap' files.

Characteristics of the EPIC dataset

Scenario 1

- Synchronization without load
- Angle difference between two generators G1 & G2 from -180 to 0 to 180 degree

Scenario 2

- Synchronization with 10kW resistive load
- Angle difference between two generators G1 & G2 from -180 to 0 degree

Scenario 3

- Generators G1 & G2 running
- 10kW resistive load

Scenario 4

- Generators G1 & G2 running with PV system switched on
- 10kW resistive load

Scenario 5

- Generators G1 & G2 running with PV system switched on
- 7kW resistive load

Scenario 6

- Generators G1 to G3 running
- 14kW resistive load

Scenario 7

- Generators G1 & G2 running
- Power supplied to iTrust's Secure Water Treatment (SWaT) testbed
- Total power consumption by SWaT up to 2.7KW when SWaT is under normal operation

Scenario 8

- Generators G1 & G2 running
- Power supplied to iTrust's SWaT and Water Distribution (WADI) testbeds

- Total power consumption by SWaT and WADI up to 5.1KW when SWaT is under normal operation and WADI is not running (power only supplied to peripherals)