

# Load Flow Contingency (N-p)

## Create contingency events and scenarios, and compare results with the base case network

This module is designed to assist in contingency analysis of grid networks. It operates in conjunction with the CYME power flow analysis modules. With it, the power engineer can create contingency events and single or multiple-outage scenarios, and compare results with the base case network data and connectivity model.

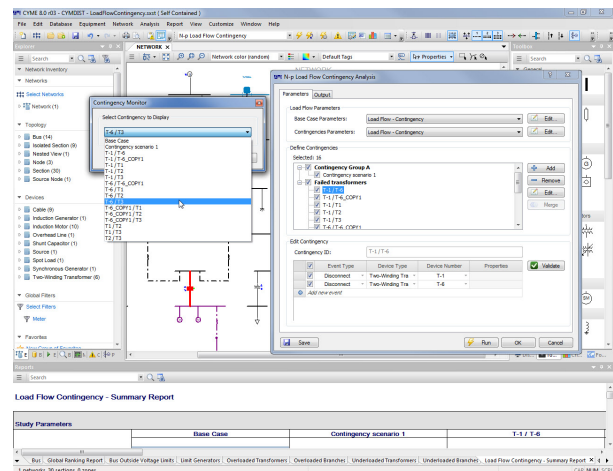
The analytical approach used by the Load Flow Contingency (N-p) module is the same as the CYME power flow. In other words, the contingency analysis produces full AC power flow solutions with no DC approximations. The module features the sequential solution of all contingencies in a single run.

### Analytical Capabilities

The Load Flow Contingency (N-p) module allow the simulation of multiple "what-if" situations in a batch analysis. Those "what-if" cases represent the loss and/or disconnection of a device. All system modifications related to a contingency refer to the base case network. Several contingencies can be concurrently defined to represent a network operation adverse scenario.

This includes the following:

- Modify loads globally, individually or by zone
- Modify generation globally, individually or by zone
- Connect and disconnect sections
- Modify shunts
- Add and remove induction and synchronous motors



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## Contingency N-1, N-2, N-3

With this option, you can define a group of single-, double-, or triple-section outage contingency studies. The network sections can be selected along with the combination of up to three elements per contingency. The program will create the desired group automatically, including the corresponding studies.

## Contingency Ranking

This feature allows you to add or eliminate contingency indexes (ranking) to the tabular report. This contingency ranking methodology is for the automatic ranking, selection of contingency cases and for the identification of the most severe contingencies.

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