

Basic Version 14.1

Objective:

To provide a thorough and comprehensive introduction to the basic features of **PowerFactory** software. The topics Data management, Loadflow studies, Short Circuit calculations, Variations, Operation Scenarios and basic reporting will be covered.

Pre-requisites:

- A good working knowledge of how to operate Windows, Windows Explorer and any normal Windows program (e.g. Word).
- A basic mathematical understanding of loadflow studies and fault calculations.
- Background experience through the use of DIGSILENT **PowerFactory** - this will greatly enhance the participants absorption of the course material. This experience may be acquired by performing the Tutorial Exercises that are found under Help/ Getting Started in **PowerFactory**.

No of participants: Minimum: 6; Maximum: 12.

Cost: see www.digsilent.co.za for latest course fees, which includes a set of course notes, lunch and refreshments. Computers, PowerFactory licences, pens and notepads are also supplied. Please note the booking clauses on the registration form.

Duration: 3 days

Topics to be covered:

Introduction

- Structure and operation principles of DIGSILENT **PowerFactory** operation; examples.
- Overview of main functionality.
- Project management; starting a project from scratch.
- Graphical User Interface/ using the single line diagram, entering a network/ defining network elements
- Populating the database / using the Data Manager.
- Using the Built in Library and creating a user library.

Load flow

- Performing a loadflow and interpretation of error messages to debug the user data.
- Use of built in tools to analyze the load flow results.
- Examination of the models used for lines, cables, transformers, synchronous and induction machines, loads.
- Voltage control and tap changers.
- Configuration of results and reporting.

Short circuit calculations

- Performing fault calculations/ single bus fault/ all busses faulted/ multiple faults/ faults on lines/ different fault types.
- Configuration of results boxes to suit the users needs.
- Reporting of results.

Advanced data management

- Variations and variation scheduler.
- Operation Scenarios and scenario scheduler.
- Study Cases and its purpose.
- Comparing of different network results.
- Management of the data and projects/ backing up advice.
- Exporting and importing data.
- Searching and filtering of data, Flexible Data Manager

Exercises

- Typical scenarios are examined using prepared networks and case studies.