POWERFACTORY

PowerFactory 2024

INTEGRATED POWER SYSTEM ANALYSIS SOFTWARE FOR

TRANSMISSION
DISTRIBUTION
INDUSTRY
GENERATION
INTEGRATION OF RENEWABLES

POWER SYSTEM SOLUTIONS
MADE IN GERMANY

PF2024

BE A PART OF
THE ENERGY
SUPPLY OF
THE FUTURE

POWERFACTORY

CONTENTS

# EXTENSIVE POWER SYSTEM ANALYSIS SOFTWARE

CALCULATION MODULES

PowerFactory provides a wide range of calculation functions, from steady state calculations to EMT simulations, from power system analysis to protection coordination. Whatever the application, PowerFactory offers fully flexible calculation combinations.
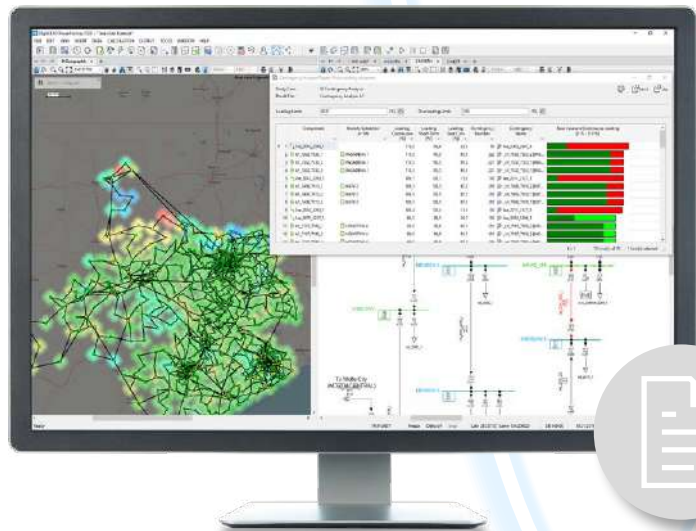
REPORTING

Built-in and user-defined reporting options are available, via the graphical interface, tabular views, plots and diagrams or external files, with reports offering easy and direct access to the relevant network elements. The reporting concept includes a PDF viewer and options to export reports in a range of formats, as well as a Report Designer that allows users to create their own customised reports.
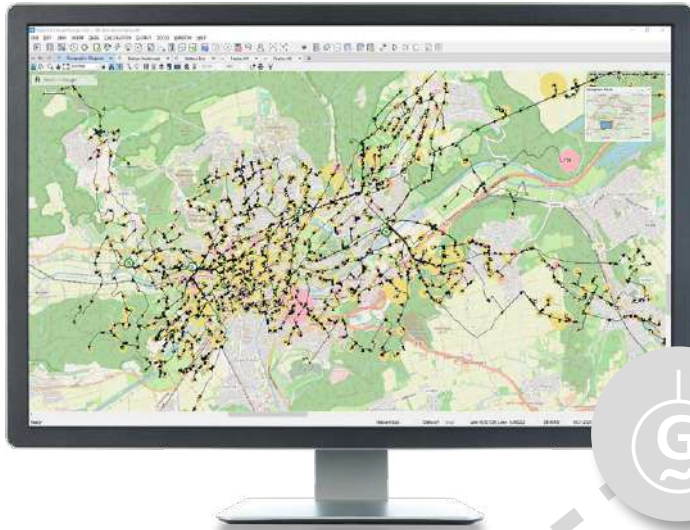
NETWORK REPRESENTATIONS

Networks are visualised in different graphical formats, used in any combination: Overview diagrams (including geographic representations), single-line bus-branch diagrams, and detailed substation views which show all components.
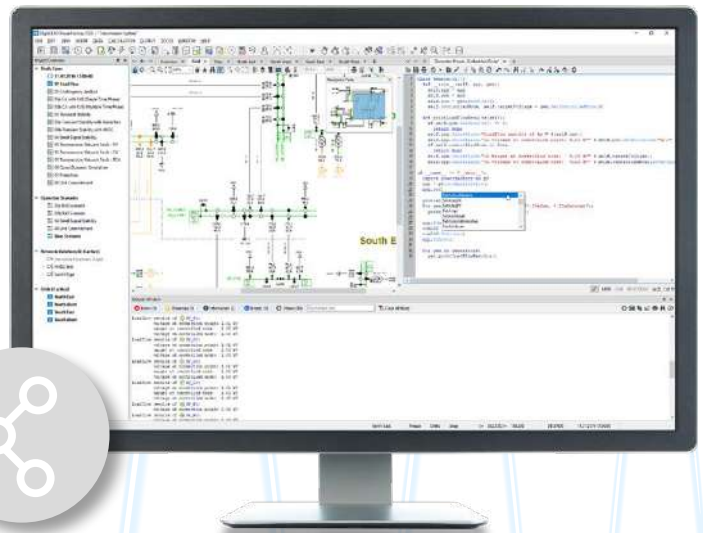
SCRIPTING AND INTERFACES

Full read and write access to network components, diagrams and results is possible using generic interfaces (DGS), scripting interfaces (DPL and Python) and built-in converters. PowerFactory engines allow for full integration into SCADA and GIS systems, and can be used for process automation. Embedding into third party applications can be realised via the PowerFactory Application Programming Interface (API).

MULTI-USER DATABASE

The ideal solution for easy sharing of data amongst a group of users. The central database can be used in conjunction with the base/derived project concept for coordinated working.

PowerFactory is a leading power system analysis software application for use in analysing generation, transmission, distribution and industrial systems. It covers the full range of functionality from standard features to highly sophisticated and advanced applications including wind power, distributed generation, real-time simulation and performance monitoring for system testing and supervision.

POWERFACTORY HIGHLIGHTS

PowerFactory is easy to use, fully Windows compatible and combines reliable and flexible system modelling capabilities with state-of-the-art algorithms and a unique database concept. Also, with its flexibility for scripting and interfacing, PowerFactory is perfectly suited to highly automated and integrated solutions in your business applications.
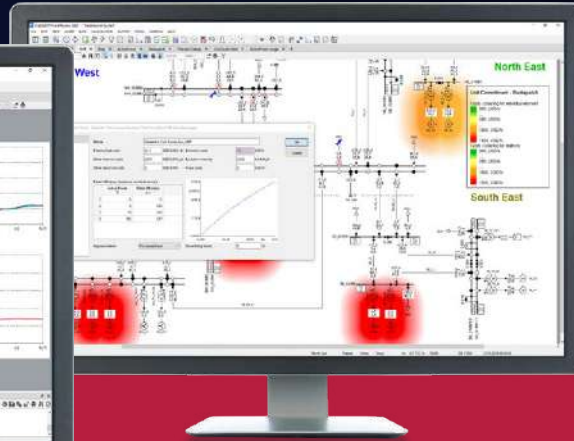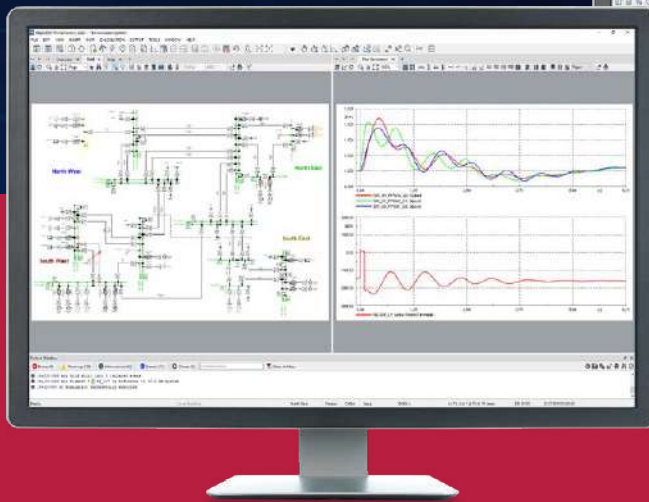
MODELLING, ANALYSING AND REPORTING IN ONE TOOL

All-in-one solution with broad coverage of state-of-the-art power system applications

Time-based network variations, ensuring accurate network modelling in all time frames

Supports all network representations and phase technologies, i.e. any kind of radial or meshed 1-, 2-, 3- and 4-wire (combined) AC and DC networks

Powerful network diagram and graphic/visualisation features, including flexible colouring options

Extensive and flexible modelling capabilities with a rich suite of power equipment models and libraries

Flexible options for node-breaker and bus-branch modelling

Efficient and robust calculation algorithms for simulation and optimisation

Sophisticated, state-of-the-art algorithms, including the use of neural networks for ultra-fast network analysis

Wide range of plots, both standard and function-specific

COLLABORATIVE WORK IN THE TEAM-EDITION

Collaborative working environment using a common master model together with deriving concept and compare and merge tools

Unique data management concept, including project versioning and archiving mechanisms

Single- and multi-user environment with support of team-working, user accounting, profiles and flexible customisation

INTERFACING

Unlimited opportunities in process automation and optimisation based on integrated scripting functionality, with full access to the software

Rich interfacing and system integration options, e.g. GIS, SCADA, EMS, ESB, …

DOCUMENTATION AND SUPPORT

Professional support via customer portal or hotline as well as continuous maintenance and development

Large application example library, demonstrating all the main calculation functions

Detailed user manual, technical documentation, rich set of application examples with video explanations, tutorials and online knowledge base

SOFTWARE EDITIONS

PowerFactory
Single-User Edition

- Single-user licence with local database
- Local licence

PowerFactory
Team Edition

- Multi-user licence with multi-user database: Microsoft SQL Server, Oracle or PostgreSQL
- Network licence with optional floating licence

PowerFactory
Multi-User Edition

- Multi-user licence with local databases
- Network licence with optional floating licence

PowerFactory
Engine Edition

- GUI-less application for integrated/ automated solutions
- Team Edition or Multi-User Edition
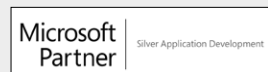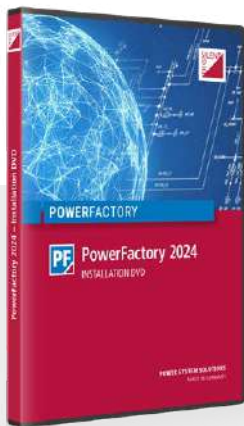
Minimum System Requirements
- Display with minimum 1280x1024 resolution
- Intel/AMD x86 (64Bit) CPU; 2 GHz or faster
- 5 GB available hard disk plus additional 5 GB per user
- Minimum 2 GB RAM available for PowerFactory process depending on network size and type of calculations
- Licence requires regular online access (every 30 days)

Supported operating Systems*:
- Microsoft Windows 10 (x64), 11
- Microsoft Windows Server 2016, 2019, 2022

Supported Database Systems* (for Team Edition):
- Microsoft SQL Server 2016, 2017, 2019, 2022
- Oracle Server 19c, 21c with corresponding client versions
- PostgreSQL 13, 14, 15, 16

*Only for the lifecycle of the relevant product. For details, see the Product Specification

BASE PACKAGE

The PowerFactory Base Package provides analysis modules coupled with a wide range of power equipment models, integrated tools and features for fundamental power system applications.

BASIC FUNCTIONS AND INTEGRATED FEATURES

Load Flow Analysis	Network Model Management
Short-Circuit Analysis	Outage Management
Sensitivities / Distribution Factors	PowerFactory Administration
Basic MV/LV Network Analysis	Network Diagrams and Graphic Features
Power Equipment Models	Results and Reporting
Network Representation	Various Data Converters

> For details, see the Product Specification

ADVANCED FUNCTIONS

The Base Package can be extended using a wide variety of additional functions according to specific user requirements. In addition, various interfaces are available to further customise the PowerFactory package.

Contingency Analysis	Reliability Analysis Functions
Quasi-Dynamic Simulation	Optimal Power Flow (OPF)
Network Reduction	Unit Commitment and Dispatch Optimisation
Protection Functions	State Estimation
Arc-Flash Analysis	Stability Analysis Functions (RMS)
Cable Analysis	Electromagnetic Transients (EMT)
Power Quality and Harmonic Analysis	Motor Starting Functions
Connection Request Assessment	Small Signal Stability (Eigenvalue Analysis)
Transmission Network Tools	System Parameter Identification
Distribution Network Tools	Scripting and Automation
Economic Analysis Tools	Artificial Intelligence
Probabilistic Analysis	Interfaces

> For details, see the Product Specification

TRANSMISSION SYSTEMS

Transmission grids are currently undergoing major changes, to reliably accommodate increasing amounts of nondispatchable resources while maintaining operational efficiency and minimising system-wide cost. The displacement of conventional generation by wind and solar power generators imposes new challenges on the ability of the grid to maintain system stability.

PowerFactory offers a complete suite of functions for studying large interconnected power systems and addressing these emerging needs. Its fast and robust simulation algorithms can be applied to any AC or DC network topology and support the simulation of new technologies such as converter-based power generation, FACTS, voltage-sourced converters (VSC), HVDC, cables and overhead lines, DC breakers, filters, and various types of MW- and Mvar-controllers and virtual power plants.

To maintain such a rich data model, PowerFactory comes with comprehensive planning tools. Operation Scenarios can be used to save operating points, thus enabling the user to study different scenarios with just a few clicks. Network Variations with time-related Expansion Stages allow the user to model network development projects including the (de-)commissioning of power system equipment. Just by changing the study time, the right network configuration will be automatically used for calculations.

PowerFactory is also perfectly suited to transmission system operation planning. It integrates a comprehensive set of tools to support automatic and parallel grid security analysis such as ENTSO-E D2CF/DACF/IDCF, and outage planning.

Multiple interfaces (API, DGS, CIM) and flexible scripting languages (DPL, Python) enable smooth integration with existing systems, and compliance with the ENTSO-E CGMES data exchange standard.

RELATED FEATURES AND FUNCTIONS

Outstanding power system modelling capabilities

Study-time based model on demand options

Support of multiple network diagrams with direct connections to the network elements

Support of node-breaker and bus-branch models

Seamless integration of network model, analysis and reporting

Contingency Analysis

Outage Management

Stability analysis (RMS and Modal Analysis)

Electromagnetic Transients (EMT)

Sensitivities / Distribution Factors analysis, including PTDF

Power Quality and Harmonic Analysis

Unit Commitment and Dispatch Optimisation

PV/QV Curve calculations

Transfer Capacity Analysis

Network Reduction

Flow Decomposition

Optimal Power Flow

Quasi Dynamic Simulation based on classical calculations, or on neural networks for ultra-fast execution

DISTRIBUTION SYSTEMS

New challenges such as reverse power flow and voltage rise due to distributed generation, as well as the integration of e-mobility, have led to an increased complexity in the planning and operation of distribution networks. Handling the associated analyses calls for sophisticated and comprehensive network optimisation tools.

To handle these challenges, PowerFactory offers a wide range of powerful tools and functions. Using built-in interfaces, the creation of the network and the input of measurement values can be achieved using GIS and SCADA data. Based on this data, the current state of the network can be analysed, for example to evaluate the hosting capacity for load and generation. For further optimisation of the network, there are numerous functions available, such as tie open point optimisation, voltage profile optimisation, phase balance optimisation, and optimal equipment placement.

A user-friendly time sweep simulation function facilitates analysis of the impact on the network infrastructure of both conventional generation and renewables, taking into account volatile distributed generation and storage systems with user-defined controls.
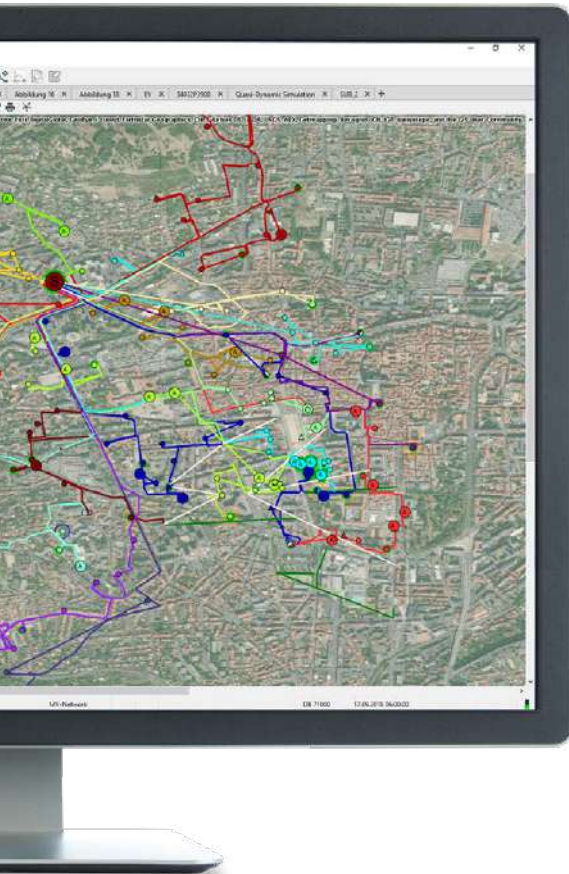
RELATED FEATURES

Models

Load models using standard load profiles or smart meter data

Flexible definition of coincidence curves for e.g. households, EV-chargers, heatpumps, etc.

Models for PV systems based on solar radiation, electric vehicles, battery storage, etc.

Innovative equipment (distribution transformer with OLTC, voltage regulators, reactive power control schemes, etc.)

Dynamic and topologically dependent feeders, essential for many distribution system applications

User-defined models for load flow and quasi dynamic simulation (QDSL models)

User Interface

Geographic diagrams with publicly available and custom map services as background

Voltage profile plots for feeders

Analysis and Optimisation

Low Voltage Load Flow Calculation based on predefined or user-defined coincidence curves

Probabilistic Analysis with stochastic modelling of distributed generation and demand

Voltage Profile Optimisation for bi-directional power flows

Reliability Analysis and Optimal Power Restoration

Power Quality and Harmonic Analysis

Protection functions

Economic Analysis Tools

Connection Request Assessment

Quasi-Dynamic Simulation

Cable sizing and derating factor determination

Feeder load scaling

Hosting Capacity Analysis

Phase Balance Optimisation

Voltage Sag Assessment

Backbone Calculation

State Estimation for balanced and unbalanced networks

Equipment Placement Functions

Optimal equipment placement for voltage regulators, batteries, remote controlled switches, reclosers and capacitors

INDUSTRIAL SYSTEMS

The design and operation of industrial networks is becoming increasingly challenging with the integration of more power electronics, sophisticated automation systems, and increased reliance on island mode operation. To face these challenges whilst ensuring continuity of production, electrical power quality, and the safety of personnel, proper modelling and analysis of the electrical networks is of the utmost importance.

PowerFactory provides a vast array of functionality perfectly suited to the industrial user's needs such as high precision load flow algorithms, flexible short-circuit calculation features, 4-wire and DC grid modelling, protection modelling and analysis tools, harmonic calculations and filter design options. In addition, PowerFactory provides up to date standards for short-circuit and arc-flash calculations, with clearly-presented results and a comprehensive and user-friendly interface.

The flexible data manager allows easy, tabular configuration of all input parameters and a spreadsheet-like export of results. To meet new challenges in industrial networks which require more detailed analysis in the time domain, PowerFactory offers the flexibility to analyse electro-mechanical and also electro-magnetic phenomena.

TYPICAL STUDIES

As an integrated simulation tool with a rich spectrum of analysis functions, a variety of analyses may be carried out using the same data model.

System analysis under different network configurations in relation to network topology, generation and load status	Harmonic distortion studies, resonance studies and filter sizing
Short-circuit calculations for AC and DC systems according to IEC/VDE, ANSI and IEEE standards	Network reliability analysis, evaluation and comparison of scenarios and fault models
HV & LV cable sizing according to IEC; NF and BS standards; ampacity, voltage drop, short-circuit capability	Time domain simulation for stability and electromagnetic transient analysis
Motor starting, re-acceleration and voltage drop analysis	Arc-Flash Analysis for AC and DC systems, according to IEEE, NFPA, DGUV and EPRI calculation methods
Protection scheme coordination (overcurrent, differential, distance and signalling)	

POWER GENERATION

Reliability, efficiency and stable operation are essential features for the generation which forms the core of any power system. PowerFactory offers tools suitable for the electrical design of power plants and for planning their operation. The broad spectrum of solutions ranges from the analysis of the electrical and mechanical behaviour in steady-state and transient conditions, to the optimisation of generator dispatch.

Modern power systems bring new challenges to conventional power plants. Besides sub-synchronous resonances (SSR) typically related to series compensation, sub- and super-synchronous torsional interactions (SSTI) with converter-based equipment are an increasing challenge. Proper analysis is essential in order to mitigate the risks of damage to equipment, and associated high costs, that can result from these phenomena.

HIGHLIGHTED POWERFACTORY CAPABILITIES AND TYPICAL STUDIES

Models of generators, governors (steam, gas, diesel, hydro), automatic voltage regulators (AVR) and power system stabilisers (PSS)

Voltage-dependent PQ capability curves

Power Quality and Harmonic Analysis

Models of motors, protection relays, power electronic converters and DC equipment

Models for grid-forming converters

Calculation of short-circuit currents
- in AC grids according to IEC 60909 and ANSI
- in DC auxiliary supply grids according to IEC 61660 and ANSI/IEEE 946

Unit Commitment and Dispatch Optimisation, including grid and security constraints

Stability and EMT simulation
- Behaviour during short-circuits and load changes
- Frequency control
- Transient stability
- Transformer inrush
- Sub-synchronous resonances (SSR)
- Sub- and super-synchronous torsional interactions (SSTI)

Small signal eigenvalue analysis for RMS simulations

Model frequency response analysis (Bode and Nyquist Diagrams)

System Parameter Identification for dynamic models

Power Plant Energy Analysis for an economic assessment of wind or solar power parks
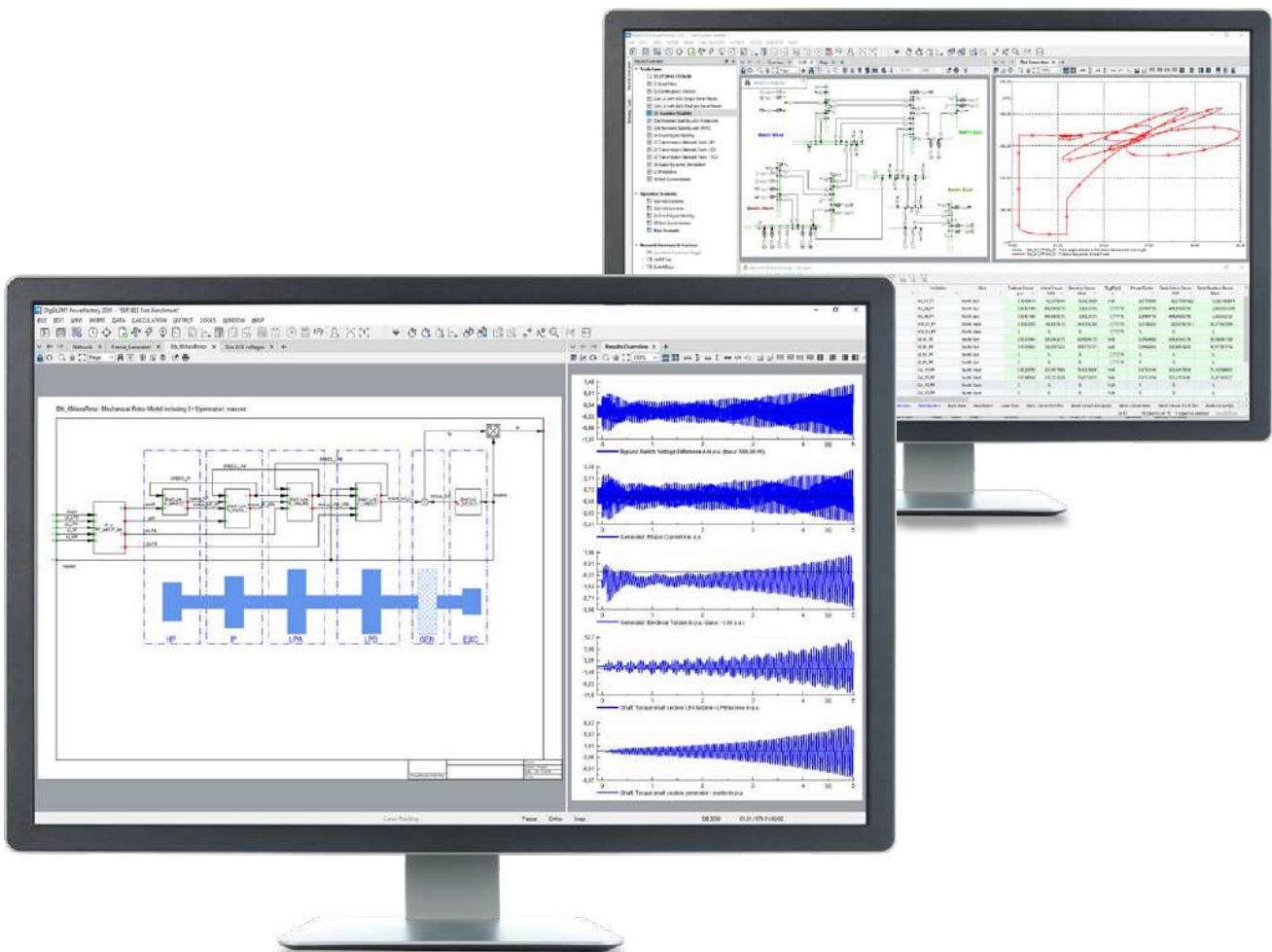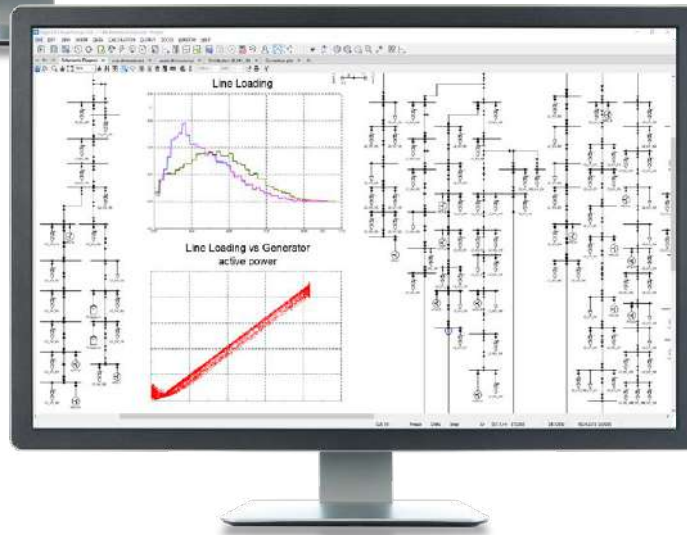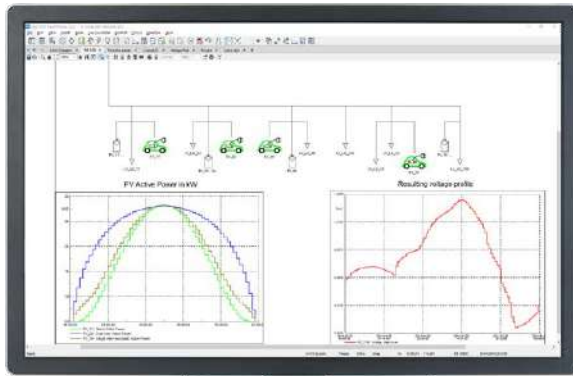
DISTRIBUTED GENERATION

Power system phenomena such as reverse power flows, voltage dips and swells, varying fault levels and equipment loading are some of the major challenges associated with distributed generation in electricity systems.

Of particular note are the challenges arising from the interaction between highly volatile generation from renewable sources and an increasing variability in consumption.

The extensive model library in PowerFactory offers users the possibility to use ready-made load flow and dynamic models for generators and converters, PV systems with integrated power calculation based on solar radiation, fuel cells, wind generators and battery storage (according to IEC and WECC).

To account for the interaction between consumption and generation in the network, models for single and three-phase loads, consumption energy profiles and models for electric vehicles can be used.

This provides the perfect basis for all the necessary analysis, from unbalanced network assessments and voltage drop/rise calculations, to Quasi-Dynamic Simulation and Voltage Profile Optimisation. Using the Hosting Capacity calculation, the remaining capacity for renewable energies can be evaluated, whilst Probabilistic Analysis and Reliability Analysis can be performed in order to determine the risks of uncertainty.

SELECTED FEATURES

MODELLING

PV system model with integrated power calculation based on solar radiation (1 and 3-phase technology)

Wind generator model with power calculation based on wind speed distribution or time-series input

Dynamic models of wind turbine generators, PV systems, battery storage and distributed energy resources (DER_A) including FRT-capability

Built-in WECC composite load model

Various reactive power control schemes for single generators or wind farm / PV park master controllers

On-load-tap-changer capability with various control schemes including line-drop-compensation for transformers and voltage regulators

Symmetrical and unsymmetrical network representation

CALCULATION

Harmonic analysis, impedance sweep and Flickermeter calculation for power quality assessment

Medium to long term Quasi-Dynamic Simulation accounting for variable generation and battery storage applications

Optimisation of distribution transformer tap positions for bi-directional power flows in systems with a high level of distributed generation, for optimised voltage profile

Short-Circuit Calculation
AC grids according to IEC 60909, ANSI and IEC 61363
DC grids according to IEC 61660 and ANSI/IEEE 946

Hosting-Capacity Analysis tool for the evaluation of spare generation or load capacity in predefined network areas

Probabilistic Analysis of load flow and optimal power flow

Reliability Analysis to identify the loss of generation and loads including optimal restoration schemes

Cable Sizing for distribution networks, derating factor and Cable Ampacity calculation

RENEWABLES

Complex studies for the integration of renewable generation into electrical networks are an integral part of network planning and analysis. PowerFactory combines extensive modelling capabilities with advanced simulation algorithms. Network and park models are easily created using an intuitive drawing toolbox, while the use of model templates and an extensive model library allow complete plant models to be constructed efficiently.

A full set of tools is provided to undertake the wide range of studies required for grid connection and grid impact analysis of wind parks, PV generation and all other renewable energy power plants. Recurring tasks can easily be automated using scripting tools, to streamline the analysis process.
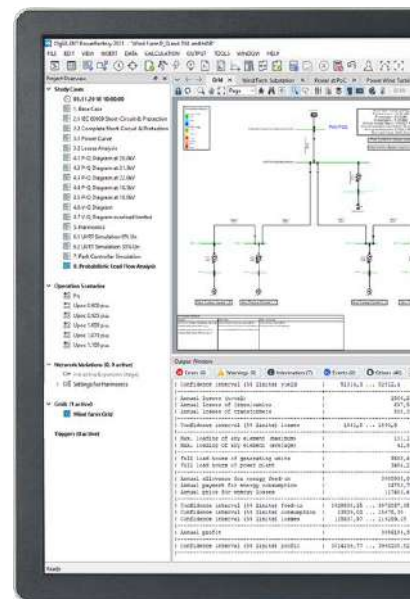
SELECTED KEY FEATURES

Economic assessment using the Power Park Energy Analysis tool

Steady-state load flow calculations taking into account voltage-dependent reactive power capability limits, power park controllers with set-point characteristics, etc.

PV system model with integrated power calculation based on solar radiation (1 and 3-phase technology)

Short-circuit calculation according to IEC 60909 and ANSI, and complete method with dynamic voltage support according to k-factor settings

Medium to long-term Quasi-Dynamic Simulation

Stochastic wind models and probabilistic analysis tools

Balanced and unbalanced stability and EMT simulation, e.g. for UVRT and OVRT analysis

Multiple domain co-simulation (RMS/EMT)

External application co-simulation based on "FMI for Co-Simulation"

Models for all established wind turbine and generator/converter types, photovoltaic systems, battery energy storage, STATCOMs and HVDC systems

Dynamic models according to IEC 61400-27-1 and WECC

Interface for external models according to IEC 61400-27-2

User-defined modelling for Quasi-Dynamic, RMS and EMT simulation

Support of discrete-time Modelica models with graphical model development environment

Interface for external FMU-models according to FMI 2.0

Encryption option for user-defined models and compilation option (DLL model interface)

Power quality assessment including harmonic analysis with frequency-dependent Norton equivalents, impedance frequency sweeps and Flickermeter calculation

Model Frequency Response analysis (Bode and Nyquist Diagrams)
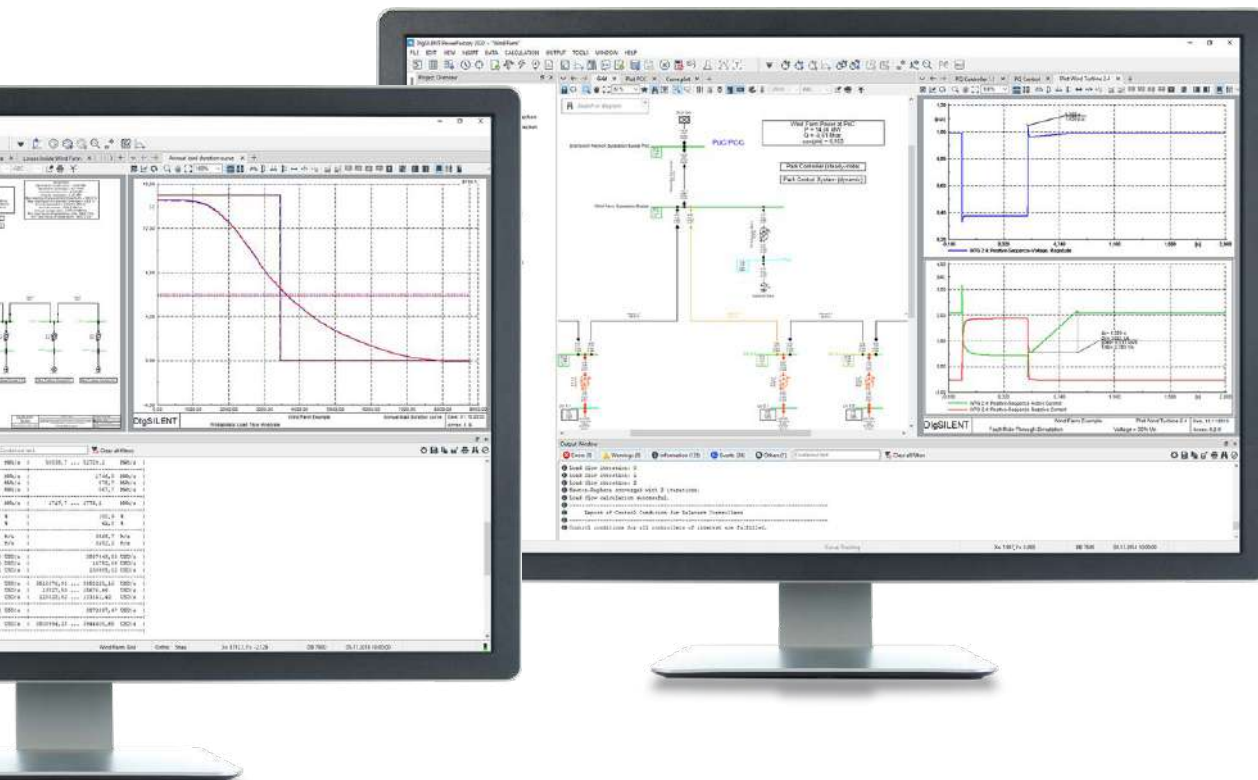
GIS INTEGRATION

Geographic Information Systems (GIS) together with Asset Management Systems are the main sources of network topology and equipment data. Many utilities use GIS exports as a basis for the PowerFactory network model. These exports may comprise detailed substation data including topology, line/cable data, load/generation data and GPS coordinates/schematic diagram information, etc.

The symbols of stations, line style and colouring can be customised according to technical properties of the objects. The built-in Compare & Merge Tool and the versioning mechanism perfectly support frequent data exchange with GIS.

PowerFactory engines can directly be integrated into GIS systems providing calculation functionality such as evaluation of renewable generation connected to the low voltage grid.
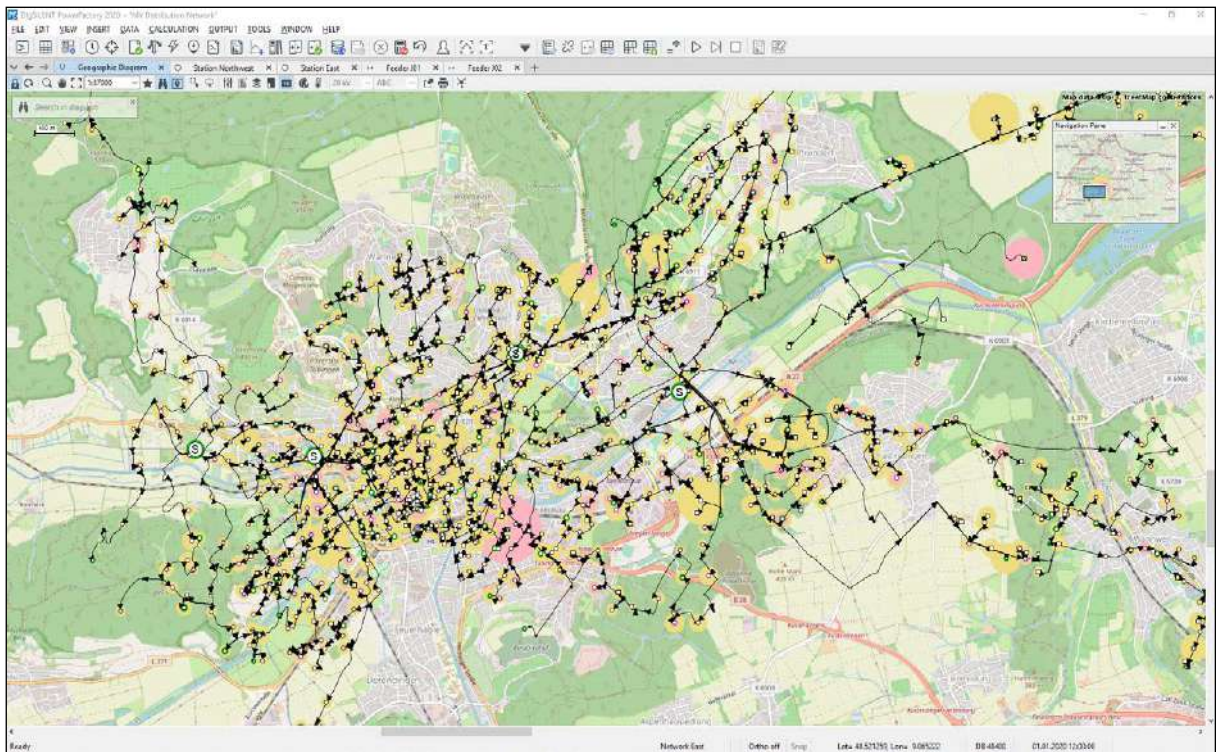
Geographic representation of a fictitious medium voltage grid in PowerFactory. Yellow circles indicate load; pink shows installed production.

PowerFactory can interface with SCADA systems as a calculation engine.

SCADA INTEGRATION

The PowerFactory OPC interface is utilised worldwide for real-time integration of PowerFactory with SCADA systems. The applications range from online state estimation, simulation mode functions (dispatcher load flow, contingency analysis, switching validation) to dispatcher training simulator with real-time transient grid simulation. Controller manufacturers use the PowerFactory OPC interface for controller development and hardware-in-the-loop tests, e.g. for smart grid controllers, PV or wind park control schemes.
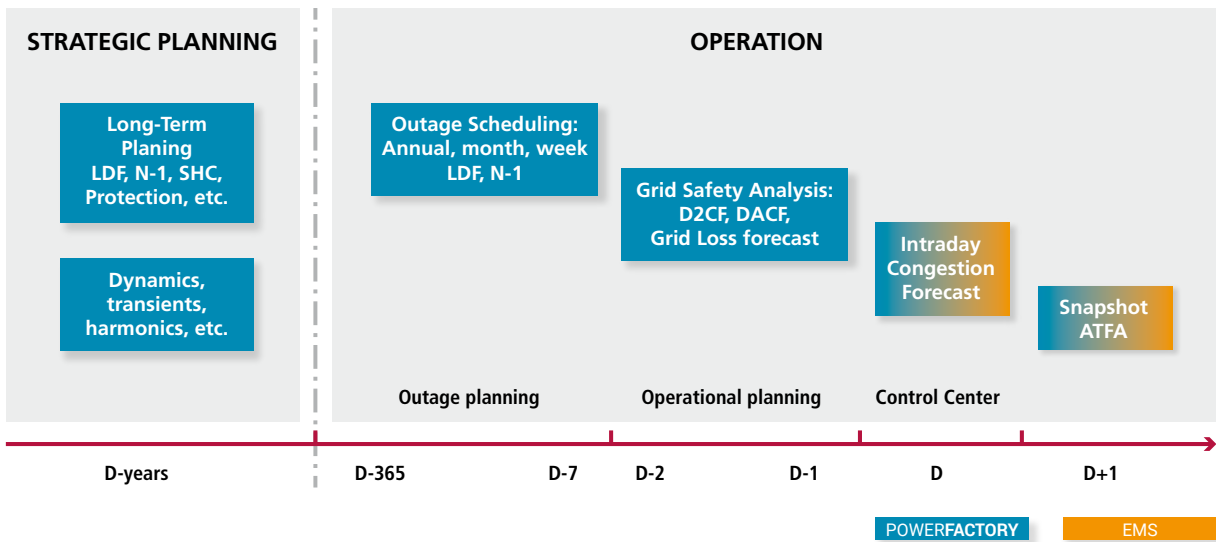
BUSINESS PROCESS AUTOMATION

PowerFactory supports standard ENTSO-E operation planning processes such as D-2, D-1 and Intra-day. The Intraday process runs as a fully-automated, parallelised process. The PowerFactory Connec-torService features message-based data exchange such as load forecast, planned generator dispatch, day-ahead cross-border exchange programs, CIM (CGMES) or UCTE-DEF files, EMS snapshots, dynamic line ratings and market coupling data.

Likewise, PowerFactory is the product of choice for business process automation in distribution planning and operation. As an example, the combined MV/LV calculation for the distribution grid of an entire country (>2 000 primary substations and > 25 000 MV feeders and > 845 000 LV grids) was automated using PowerFactory and bulk exports of GIS data.

STRATEGIC PLANNING	OPERATION		
Long-Term Planing LDF, N-1, SHC, Protection, etc.	Outage Scheduling: Annual, month, week LDF, N-1		
	Grid Safety Analysis: D2CF, DACF, Grid Loss forecast		
		Intraday Congestion Forecast	
Dynamics, transients, harmonics, etc.			Snapshot ATFA
	Outage planning	Operational planning	Control Center
D-years	D-365 ⟶ D-7 ⟶ D-2	D-1	D ⟶ D+1

POWERFACTORY   EMS

Processes in strategic and operational network planning that are well supported by DIgSILENT PowerFactory in customised automated solutions.

INTEGRATION COMPONENTS

PowerFactory operated in engine mode provides complete PowerFactory functionality for external systems. The engines can be controlled via a PowerFactory ConnectorService, PowerFactory API, DPL or Python scripts. Various interfaces such as CIM, UCTE-DEF, OPC and DGS support bi-directional data exchange with different systems.

The PowerFactory ConnectorService is an ASP.NET Core based Windows Service that allows the user to configure, execute and observe processes running in PowerFactory. It uses a flexible plugin concept: standard or customer-specific plugins are combined and made available to the ConnectorService, so as to meet the needs of the individual customer. The External Application communicates with the ConnectorService e.g. via RESTful API.

The ConnectorService component provides access to multiple PowerFactory engines via web services. Built-in queuing and scheduling makes it easy to integrate the PowerFactory engine with other applications.

The ConnectorService comes with standard visualisation tools. The status of both the PowerFactory instances and the individual processes as well as additional information, such as calculation results can be monitored.

SOLUTION ARCHITECTURE
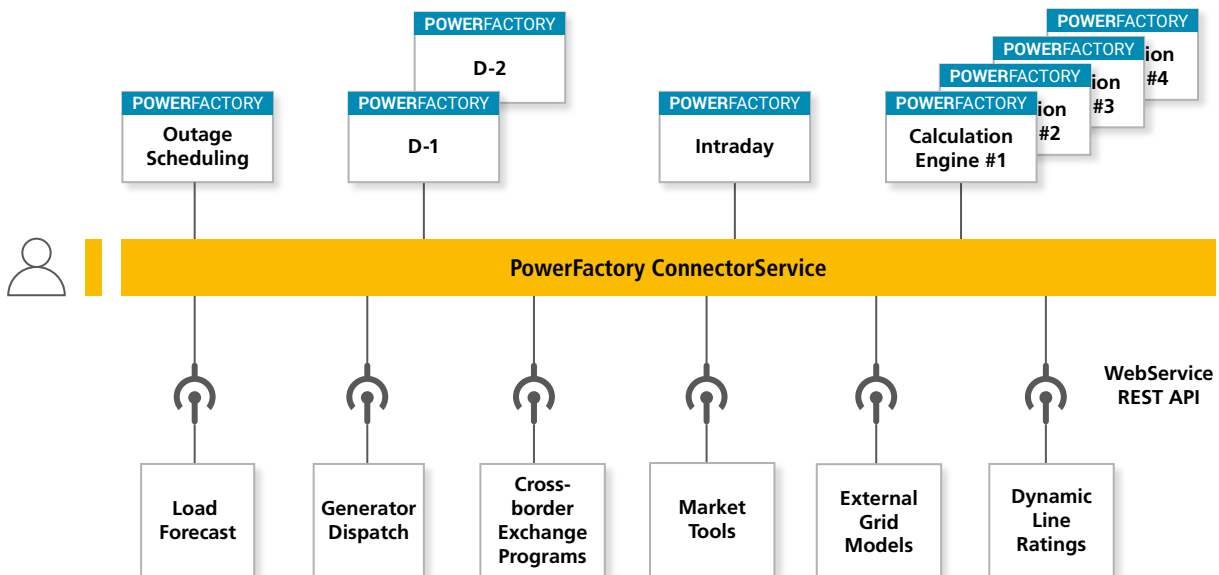
System architecture automation for operational processes.

MAINTENANCE & SUPPORT SERVICES

· Continuous product maintenance and development

· Free version upgrades as well as regular software updates

· Professional support via customer portal or hotline

· Detailed manual and tutorial with comprehensive examples

· Knowledge Base including FAQs, application examples and demonstration videos

· Regular newsletter containing information about PowerFactory releases and seminar schedules

TRAINING COURSES

· Modular training concept covering all PowerFactory functions

· Standard and user-specific training courses, including

    – Load flow and short-circuit

    – Power system stability

    – Dynamic modelling workshop (DSL)

    – Harmonic analysis

    – Electromagnetic transient analysis

    – Grid connection of renewable generation

    – Protection in PowerFactory

    – Scripting in PowerFactory with Python

· Training courses are offered online and in-house
at DIgSILENT offices, as well as at customers´ own sites.

· Self E-Learning courses available soon **NEW**

SALES CONTACT

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Availability of support services depends on existing licence agreement. For more details, see our PowerFactory Maintenance and Support Services Flyer that is available in the Download Area of our website.

ABOUT DIGSILENT

DIgSILENT was founded in 1985 and is a fully independent and privately owned company located in Gomaringen close to Stuttgart, Germany. DIgSILENT continued expansion by establishing offices in Australia, South Africa, Italy, Chile, Spain, France, the USA and Oman, thereby facilitating improved service following the world-wide increase in usage of its software products and services. DIgSILENT has established a strong partner network in many countries such as Mexico, Malaysia, UK, Colombia, Brazil, Peru, China and India. DIgSILENT services and software installations are used in more than 170 countries.

POWERFACTORY

DIgSILENT produces the leading integrated power system analysis software PowerFactory, which covers the full range of functionality from standard features to highly sophisticated and advanced applications including wind power, distributed generation, real-time simulation and performance monitoring for system testing and supervision. For various applications, PowerFactory has become the power industry's de-facto standard tool, due to PowerFactory models and algorithms providing unrivalled accuracy and performance.

STATIONWARE

StationWare is a central asset management system for primary and secondary equipment. In addition to handling locations and devices in a user-definable hierarchy, the system allows manufacturer-independent protection settings to be stored and managed in line with customer-specific workflows. It facilitates the management of a wide variety of business processes within a company and centralises the storage of documents. StationWare can be integrated seamlessly into an existing IT environment and the interface with PowerFactory enables the transfer of calculation-relevant data for protection studies.

MONITORING SYSTEMS

Our Power System Monitoring PFM300 product line features grid and plant supervision, fault recording, and power quality and grid characteristics analysis. The Grid Code Compliance Monitoring PFM300-GCC system also offers compliance auditing of power plants with respect to grid code requirements. This monitoring and non-compliance detection provides the complete transparency and assurance required by both plant operators and utilities.

TESTING AND CERTIFICATION

The DIN EN ISO/IEC 17025 accredited DIgSILENT Test Laboratory for NAR Conformity carries out measurements in accordance with FGW TR3 on the operational type 1 generation plant (directly coupled synchronous machines). These measurements are carried out in accordance with the "individual verification procedure" as required by the German grid connection guidelines VDE-AR-N 4110/20/30. DIgSILENT has many years of international expertise in the field of generation and consumption/load systems testing. The in-house developed and produced measuring systems enable the testing laboratory to offer customised measuring solutions for a wide range of power plants and applications.

SERVICES

DIgSILENT GmbH is staffed with experts of various disciplines relevant for performing consulting services, research activities, user training, educational programs and software development. Highly specialised expertise is available in many fields of electrical engineering applicable to liberalised power markets and to the latest developments in power generation technologies such as wind power and distributed generation. DIgSILENT has provided expert consulting services to several prominent PV and wind grid integration studies.

SERVING MORE THAN 170 COUNTRIES

For more information, visit
www.digsilent.de

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