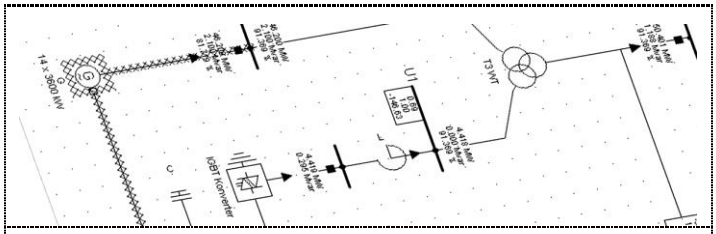

DIgSILENT Technical Documentation

PowerFactory V14.1

Release Notes

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Release Notes

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Version	Release	Description
14.1.3	06.12.2011	Release Notes for PowerFactory Version 14.1.3
14.1.2	12.08.2011	Release Notes for PowerFactory Version 14.1.2

Table of Contents

1 PowerFactory V14.1.3

1.1 Minor Enhancements/Fixes

1.1.1 Load Flow/Optimization/Network Reduction

Description	Solution Note	ID
Station Controller/SVS: Allow negative droop.	A negative droop can now be entered to handle the Q measurement direction.	#7072
Station Controller: Load flow calculation fails if two machines are connected on LV side.	Problem solved.	#6654
Station Controller: Load flow outer loop is toggling in special cases when options "Max. Reactive Reserve" and "HV control" are enabled.	Problem solved.	#7069
Station Controller: Load flow calculation fails if the reactive power contribution is zero and the machine controls the local terminal voltage.	Problem solved.	#7027
Station Controller: Droop is ignored if the option "Enabled Droop" is enabled and a reduced switch is selected for the "Q measured at" parameter.	Problem solved.	#7075
Load flow calculation does badly converge if the option "Automatic Tap Adjustment" is enabled for a transformer with a small short-circuit impedance.	Problem solved.	#6975
Load flow calculation fails in certain cases with block structure and power equation.	Problem solved.	#7141

Description	Solution Note	ID
Unbalanced load flow calculation: In special cases loads are wrongly considered as unsupplied.	Problem solved.	#6936
DC/AC Load flow calculation: Loading not correctly calculated for a 2-Winding transformer with explicit neutral connection (ElmTr2n).	Problem solved.	#6856 #7136
Misleading warning message if distributed slack by generation is enabled for DC network	Problem solved. Message improved.	#6841
PowerFactory is crashing when a pure neutral terminal ("N") is marked as "Earthed".	Problem solved.	#6854
Wrong warning message: "Number of parallel lines must be equal to the number of circuits in tower type" for lines containing a line section using a tower type with 2 circuits.	Problem solved.	#7093
PowerFactory crashes when a relay is defined in a cubicle without connected element.	Problem solved.	#6907
The sign of Q (reactive power) is rotated if a cubicle is selected of a reduced breaker connected on a gen-oriented model (e.g. syn. Machine).	Problem solved.	#7048
AC Optimal Power Flow calculation crashes when a PWM converter is in the grid.	Problem solved.	#7092

Description	Solution Note	ID
Network Reduction: The short-circuit equivalent does not match if load flow is calculated with distributed slack and some generators are inside the reduced area.	Problem solved.	#6796
Network Reduction: In special cases Coupling elements (ElmTow) are wrongly deleted after reduction.	Problem solved.	#7157

1.1.2 Contingency Analysis

Description	Solution Note	ID
AC/DC Contingency Analysis - Single Time Phase: Support EvtLod/EvtGen/EvtTap.	The following events are now support for AC/DC contingency analysis (singe lime phase): - "Load Event" (EvtLod) - "Dispatch Event" (EvtGen) - "Tap Event" (EvtTap)	#6729
Multiple Time Phase Contingency: Comparison of contingencies does not work.	Problem solved.	#6972
Multiply Time Phase Contingency: Trace fails if a busbar is split (e.g. meshed corner).	Problem solved.	#6713
Multiply Time Phase Contingency: After a closing a bus bar coupler, sometimes load flow calculation does not converge.	Problem solved.	#7222
Multiply Time Phase Contingency: Endless loop if several switches in a substation are closed and then opened.	Problem solved.	#6899

Description	Solution Note	ID
Contingency Definition: Erroneous contingency numbering and incorrect behaviour in runtime engine mode.	Problem solved.	#6943

1.1.3 Short-circuit

Description	Solution Note	ID
Unbalanced "complete": Angle of transient currents (bus results) are wrongly rotated by 180 deg (I0', 3I0', I1', I2').	Problem solved.	#6882
DFIG/PWM: Transient current not correct if no. of parallel machines greater than 1 (for Equivalent Synchronous Machine Model).	Problem solved.	#6992 DIG704
The maximum breaking current for breakers is not accurately calculated if the option: "Calculate max. Branch Currents = Busbar Currents" is disabled.	Problem solved.	#7253
PowerFactory crashes when a relay is defined in a cubicle without connected element.	Problem solved.	#6907
Ambiguous error message: Short-circuit at line with length = 0km.	Problem solved. Error message improved.	#6833
Short-circuit with current iteration: For additional outer loop iterations, the last iteration is not displayed.	Problem solved.	#7031 DIG746
DPL function: ComShc::ExecuteRXSweep not working for IEC calculation.	Problem solved.	#7134

1.1.4 Simulation/Modal Analysis

Description	Solution Note	ID
Static Generator: Signals "cosref" and "sinref" are not displayed in "Variable Selection" (IntMon) for unbalanced RMS simulation.	Problem solved.	#6918
EMT Simulation, initialized from unbalanced load flow, not correct for DFIG machine (with two connections).	Problem solved.	#7013
Current Measurement: Current is rotated if defined in a cubicle of a reduced breaker connected on a gen-oriented model (e.g. syn. Machine).	Problem solved.	#7048
"Result Folder" and "Event List" are not automatically assigned when starting the simulation with the "Start Simulation …" button.	Problem solved.	#7096
ElmFile reading ComTrade: Wrong interpolation if oversampling is applied.	Problem solved.	#6826 DIG637
Modal Analysis: Performance optimization for report.	Performance improved for reports.	#7080

1.1.5 Reliability Assessment

Description	Solution Note	ID
Too many switches are closed after executing substation automation.	Problem solved.	#6974
Maintenance events depend on previous run of calculation.	Problem solved.	#6723

1.1.6 Protection Models

Description	Solution Note	ID
Context Menu: "Show" -> "Rx-Plot" on Sub-relay corrupts relay model.	Problem solved.	#6526 #7086
Distance polygonal unit: Sometimes simulation hangs after relay is tripping.	Problem solved.	#7131
Polarizing Unit: "Assume k0" is not correctly working if earth factor representation is "Z0/Z1" or "(Z0-Z1)/Z1)".	Problem solved.	#7003
Polarizing Unit: Earth factor representation should be displayed.	The "Earth factor representation" is now displayed the polarizing unit.	#7063
Time Overcurrent unit: "Reset delay" does not work when the reset time multiplier is set to 0.	Problem solved.	#6735 #6967
Characteristic is not correctly displayed when the "Min Trip/Max clear Time Overcurrent" usage is set (TypChatoc).	Problem solved	#7054
Mho unit: Does not manage correctly the "External" and the "Reverse external" direction.	Problem solved.	#7058

Description	Solution Note	ID
Single phase CT adapter block: The output signals for the real and imaginary part are not correctly calculated.	Problem solved.	#7181
Distance Polygonal unit: Used for "GE UR" devices does not trip when set non directional.	Problem solved.	#7056
SEL 311: 51N unit set as directional element looking at the forward direction trips for a reverse fault.	Problem solved.	#7060
Power Swing unit: Number of crossings are not correctly counted.	Problem solved.	#6998
The Siemens 7UM62x relay model does not trip during an Out-Of-Step simulation when the number of crossing is greater than 1.	Problem solved.	#6962 DIG505
ABB Polygonal Unit (670): Impedance calculation for earth faults is not correct. A wrong earth compensation factor is used.	Problem solved.	#7238
Distance Blinder unit: Dialog does not show the "R range" for the "Neg. resistive Blinder".	Problem solved.	#6958
Power Swing unit: Dialog shows the blocking configuration option even when the blocking is not available.	Problem solved.	#6960
Recloser unit: "logic" tab page loses all lines except the first one when a simulation is initialized.	Problem solved.	#7014
A discrete range for an integer variable is not correctly working. Object always modified when opening the dialog.	Problem solved.	#7084

1.1.7 Single Line Graphic

Description	Solution Note	ID
Improvements: Colouring according to results of Contingency Analysis.	Improvements: For alarm mode "Voltage violation / Overloading": - Colour overloadings according variables "maxLoading"/"maxLoading_st" and voltage violations according to "max_v"/"min_v". For other mode "Low and High Voltage / Loading": - Colour loadings of branch elements according variables "maxLoading"/"maxLoading_st" and voltages according to "min_v"/"max_v". Beachballs colouring according to max. voltage deviation from base case when two colours are used in mode "Low and High Voltage / Loading". Beachballs colouring according to max. absolute voltage violation when two colours are used in mode "Voltage violation/Overloading".	#7044
Boundary colouring for composite objects.	Boundary colouring improved.	#6846
Area and Zone colouring for composite objects using more than one colour	Area/Zone colouring improved.	#6913
Performance Optimization: Opening a SGL-diagram containing many graphical composite nodes takes a very long time.	Performance improved.	#6845
Redrawing more than one branch object at the same time not working properly.	Problem solved.	#7039
Missing info message when bay ends are already occupied in other variation.	Problem solved.	#6699

Description	Solution Note	ID
Changing peg points of rectangle not working properly.	Problem solved.	#7082
"Apply to all graphics" for layers shall only consider visibility.	Problem solved.	#7047
Exporting diagram as WMF does not show logo in title if zoomed in.	Problem solved.	#7040
WMF export leads in special cases to incorrectly displayed background graphic.	Problem solved.	#6755
Alignment of local text boxes not working.	Problem solved.	#7107
Lines not ending exactly on a drawn node lose in special cases their graphical connections.	Problem solved.	#7229
In special cases the connecting to substation in simplified view is not working correctly.	Problem solved.	#7230
Colouring according "Voltage Levels": The transformer symbol is in special cases only shown half.	Problem solved.	#7231
Split and joined lines are not considered in permanent Diagrams.	Problem solved.	#7232

1.1.8 Graphical User Interface / Dialog

Description	Solution Note	ID
PowerFactory is in special cases not responding when element context menu should pop-up.	Problem solved.	#6997 #6839 #7225
Characteristic cannot be defined for rating object (IntThrating) e.g. for seasonal ratings	Problem solved.	#6876
Lines/Transformers/Series Reactor: Max. Loading parameter is not displayed in the Data Manager at load flow page.	Problem solved.	#6887
Station Controller: Wrong voltage setpoint is displayed when pressing "info" button and "Enable Droop" and "bus target voltage" option is enabled.	Problem solved.	#7067
Switching Rule for Substations: Only open switches are collected as default switches.	Problem solved.	#6984
PowerFactory is crashing when filtering (SetFilt) according to "*.IntRef" and empty references exists.	Problem solved.	#6808
PFD export dialog: Disabling "Export to former version" does not work.	Problem solved.	#6923
Content of block diagram is not shown if no project is active.	Problem solved.	#6719
Branch (ElmBranch): "Tie Off" detection not correct for special cases.	Problem solved.	#7204

Description	Solution Note	ID
Data Manager: For "Common Impedance" are wrong column names displayed for transient/sub-transient impedances.	Problem solved.	#7220

1.1.9 Merge Tool

Description	Solution Note	ID
Hidden objects are not correctly merged.	Problem solved.	#6462
Source project corrupted by deletion of copied data.	Problem solved.	#6836
Name changes of objects in variations are ignored.	A warning message about ignored hidden objects is printed to the output window.	#6862

1.1.10 DPL

Description	Solution Note	ID
"SetVal" function not working for integer attributes.	Problem solved.	#6821

1.1.11 Reports

Description	Solution Note	ID
Unhandled exception caused by contingency report (ComCntreport).	Problem solved.	#6955

Description	Solution Note	ID
ASCII Result File Export: Header should use the element name like the subplots.	Problem solved.	#6817

1.1.12 Converter / Import / Export / DGS / Engine

Description	Solution Note	ID
DGS: Import of load data 'operating point' fails for mode 'I, cos(phi)'.	Problem solved.	#6753
DGS 5.0 Import: - Pointers from EditObject to graphics objects are not set. - Crash if HiddenObject table contains invalid references. - Object with alternative input modes for attributes e.g. Shunt (ElmShunt) are in special cases not correctly imported.	Problems solved.	#6814 #6996 #7210
Successive DGS imports gradually getting slower.	Problems solved.	#6811
API: Engine mode lost after API destruction.	Problem solved.	#7077
PSS/E export: "Use Characteristic Names" leads to a PowerFactory crash.	Problem solved.	#6725
PSS/E import is crashing when the "Name" of the "bus data" is longer than 12 characters.	Problem solved.	#6881

Description	Solution Note	ID
DVG Import improvements ...	Improvements: - Modified structure by adding Sites and Substations - Support of Shunts and NEC/NER elements - Various minor fixes	#7266
CIM: ENTSO-E 2009 Export: - EquipmentContainer handling improvements - various problems	Problems solved.	#7119 #7130
CIM: ENTSO-E 2009 Import: - Several RegulatingObjects controlling same busbar. - various problems	Problem solved.	#7128 #7165 #7174

1.1.13 Miscellaneous

Description	Solution Note	ID
OPC link needs to be supported for 64bit PowerFactory version.	OPC link for 64bit PowerFactory version now supported.	#7155
Data Verification: Modifies input parameters if characteristics are present.	Problem solved.	#7226
German online help.	The German online help is now available.	#7185
Automatic check/repair mechanism required when user settings are corrupted.	Problem solved.	#6790
PFD import into SQL Server Database fails in a special case.	Problem solved.	#6706
SQL Server: Missing entries in reference list (Context menu "Output" -> "Reference List").	Problem solved.	#6851

Description	Solution Note	ID
Consider project purge time for minimum version creation time.	Problem solved.	#6823
DPL Library: "Stochastic Switching"	New DPL script for "Stochastic Switching" analysis for EMT simulations available.	#7194
DPL Library: "Impedance Loci"	New DPL script. It supports the definition of R-X loci for the harmonic calculation.	#7195
Template Library improvements.	"DFIG" templates: - Voltage correction for the 2-W. Transformer Type - Model improvements: + Speed could now flexible initialized + Power ramp after fault now possible "FullyRatedConverterWTG" templates: - Generator is now the "main" slot. - Voltage before fault is now flexible (PT1 tracking) or optional constant. "PhotovoltaicSystem_0.4kV_0.5MVA" template: - Converter (ElmGenstat) is now main slot. - Description in model adjusted. - i_EEG activates now correct mode. "VariableRotorResistanceWTG_0.69kV_0.66MW" template: - Type rotor resistance adjusted to value from controller. - A-stable option activated for all models. - Generator is now the main slot.	#7216
Library: Standard Macro (1+ssT3)_(1+sT1+ssT2) is not correct.	Macro improved.	#7170
PowerFactory API: Should not reset calculation if calculation irrelevant attribute was changed.	Problem solved.	#7190
PowerFactory is in special cases crashing when running "Flicker Meter" calculation.	Problem solved.	#6849

Description	Solution Note	ID
License Server v14.1 fails to record number of checked out floating licenses in log file.	Problem solved.	#6787
Compatibility issue during setup under Vista/Windows.	Problem solved.	#6477

2 PowerFactory V14.1.2

2.1 Minor Enhancements/Fixes

2.1.1 Load Flow

Description	Solution Note	ID
Wrong "Reactive Power Limit Exceeded ..." output messages after load flow for machines using voltage dependent limit curves.	Problem solved.	#6492
Station Controller: Load flow with enabled option "No Initialisation" fails for Static Generators and DFIG Asynchronous Machine.	Problem solved.	#6509
DC load flow: Wind Zone Scaling Factor not considered for DFIG Machines (ElmAsmsc).	Problem solved.	#6536
Shunt: Current through Capacitor not correctly calculated for unbalance load flow.	Problem solved.	#6499
Station/Tap Controller: Non-deterministic load flow results if the voltage priority is equal.	Problem solved.	#6493

2.1.2 Contingency Analysis

Description	Solution Note	ID
Parallel Contingency: Intelligent time out check.	Improved alive checks for slave processes.	#6481
Multiple time phases: Toggle between AC/DC load flow settings erroneously blocked.	Blocking of AC/DC selection removed.	#6429
AC Contingency Analysis: Voltage Step Change should be voltage deviation from base case in per unit.	Problem solved.	#6438
DC Contingency Analysis: Huge loading if both a line and its branch (ElmBranch) are defined in interrupted table.	Problem solved.	#6602 DIG515
DC Contingency Analysis (Optimized Method): Huge loading if PWM converter controls remote flow.	Problem solved.	#6635 DIG578
Multiple time phases: No Detailed output possible.	Problem solved.	#6551

2.1.3 Harmonics

Description	Solution Note	ID
Shunt: Current through Capacitor not correctly calculated for unbalanced harmonics load flow (with and without IEC sources)	Problem solved.	#6660 #6499
TIF factors for balanced calculation are incorrect (orders 5,11,17,...)	Problem solved.	#6506

Description	Solution Note	ID
DFIG (ElmAsm): Harmonic Model "Impedance" required.	Additional option for the harmonic model of DFIG machines: "Impedance" The "Impedance" option is compatible to V14.0.	#6681
Incorrect HD and THD for edge elements if option "Based on rated voltage/current" is enabled.	Problem solved.	#6672 DIG583
The filter result report is not correct if the output frequency is not the fundamental frequency e.g. 250Hz.	Problem solved.	#6501
Calculation of flicker in unbalanced case incorrect.	Problem solved.	#6684
For harmonic flicker calculation, all DFIG models should always be modelled as current source in the positive sequence system.	Problem solved.	#6687

2.1.4 Short-circuit

Description	Solution Note	ID
Shunt: Current through capacitor not correctly calculated for unbalance short-circuit calculation.	Problem solved.	#6499
Tower/Lines: Short-circuit without load flow initialisation fails if z0 = 0	Problem solved.	#6519
Option: "Current Iteration" => "du" not correctly calculated.	Problem solved. The voltage drop is now calculated as follow: du = |u(pre-fault)| - |u|	#6469
Short-circuit at a branch fails location is set to 100%.	Problem solved.	#6569 DIG572

Description	Solution Note	ID
Edge element result: m:BrkIpload, m:BrkIbload results are in special cases not available (=0).	Problem solved.	#6647

2.1.5 Simulation

Description	Solution Note	ID
PWM Converter (ElmVsc/ElmVscmono) blocking mode for RMS model.	A new input signal is available to block the PWM converter to switch from a controlled IGBT to a non switched rectifier diode model. The blocking mode can be switched on: - per parameter event (EvtParam): "Name of Variable" = "block" - per DSL if the "block" input signal is connected. block = 1 => block (Diode Mode) block = 0 => release blocking In addition, for the RMS simulation the cell capacitor can now be entered in the dialog.	#6628
Unbalanced RMS Simulation: The output signal "fe" of the Voltage Measurement (StaVmea) is not correctly initialized from an unbalanced load flow.	Problem solved.	#6475
Shunt Controller: Model cannot be initialized for unbalanced RMS simulation.	Problem solved.	#6678 DIG528
DFIG (ElmAsm): The rotor currents (Ird, Irq and Ira/b/c) are #INF or #IND.	Problem solved.	#6512
Short-circuit (with short-circuit event) on a branch (ElmBranch) cannot be cleared.	Problem solved.	#6658

Description	Solution Note	ID
RMS Simulation: The DSL "lim()" function is in special cases not correctly working if "Automatic Step Size Adaption" is enabled.	Problem solved.	#6494
Improvements for PQ/I/CT … measurement initialization.	The output signals of PQ/I measurement (StaPqmea/StaImea) and CT (StaCt) are now always initialized.	#6648
Results not correct if recording e.g. the current of a non-detailed switch.	Problem solved.	#6691

2.1.6 Reliability Assessment

Description	Solution Note	ID
Colouring of feeders incorrect after calculation.	Problem solved.	#6609
Reliability trace does not correctly reflect the maintenance events.	Problem solved.	#6610
Common Mode Failure is calculated as ideal (frequency and duration are 0.0)	Problem solved.	#6631

2.1.7 Protection Models

Description	Solution Note	ID
Current transformer (StaCt) on breaker measures an incorrect currents (=0).	Problem solved.	#6472
Fuses, stored inside a cubicle are not correctly considered if the breaker reduction mode is set to "enhanced".	Problem solved.	#6473 DIG535
Overcurrent Unit: Breakers in detailed substation are not correctly identified for the "Total Clear Curve" definition.	Problem solved.	#6537
Relay Logic: PowerFactory is crashing when running load flow/short-circuit if an additional switch is selected in the "Open" table.	Problem solved.	#6591
Time-Overcurrent Unit (RelToc): "Reset delay" does not work when the reset characteristic is an ANSI/IEEE equation.	Problem solved.	#6524
The negative sequence current (I2) value is not calculated properly running an EMT simulation if the DFT filter is enabled.	Problem solved.	#6525
The relay differential block must be improved to support different ways to define the harmonic blocking and to allow a delayed trip with inverse characteristic	Problem solved.	#6531
R-X-Diagram: Number of parallel transformers is not considered when drawing transformer impedance.	Problem solved.	#7249

2.1.8 Single Line Graphic

Description	Solution Note	ID
In special cases PowerFactory is crashing when activating a variation.	Problem solved	#6530
WMF export/printing: - leads to incorrectly displayed company logo. - Picture does not correspond to given angle e.g. the picture is rotated by 90 deg.	Problems solved.	#6589 #6669
De-energized colouring: For branches (ElmBranch) containing switches (StaSwitch) or CT's (StaCt), Relays … the branch always shown as de-energized.	Problem solved.	#6676
Copy-> Paste of a line leads to missing graphical connections if it connects two substations.	Problem solved.	#6664
Cubicle connection lost after connecting a load at a substation and no bay is free.	Problem solved.	#6693 DIG604
Mark in Graphic is not marking the line end if connected to beach ball.	Problem solved.	#6557
Context Menu: "Define" -> "Zone/Area/Owner/Operator" can take a very long time if executed from diagram.	Performance improved.	#6571 DIG524
Branch (ElmBranch): Wrong result box is displayed (e.g. loading was displayed from first/last connected line instead of the branch).	Problem solved.	#6651
Inserting a template and connecting into substation is not correctly working.	Problem solved.	#6665

Description	Solution Note	ID
In "Draw existing net elements" the logical switch icon should list switches of substation drawn in simplified view.	Problem solved.	#6587
Missing description of "Inactive" colour in colour legend if option "1. Energizing Status" is enabled.	Problem solved.	#6544
Improperly drawn connection lines after CIM import	Problem solved.	#6523

2.1.9 Graphical User Interface / Dialog

Description	Solution Note	ID
Virtual Instrument, Curve-Input: Selection of matrix object is not possible.	Problem solved.	#6541
Data Manager context menu: "Characteristic" -> "New Characteristic" -> "Characteristic from File" is not working	Problem solved.	#6543 DIG501
Path colouring is not automatically set when a new path is defined.	Problem solved.	#6595
Capability diagram (ElmSym/ElmGenstat/ElmAsm): wrong x-axis => must be from -1 to 1	Problem solved.	#6594
Virtual Power Plant: Incorrect tables for dispatchable/non-dispatchable machines when using variations.	Problem solved.	#6573

2.1.10 Converter / Import / Export / DGS / Engine

Description	Solution Note	ID
PSS/U import: - Current ratings in line types are not imported. - Single phase lines are not correct connected to the corresponding phase.	Problems solved.	#6503 DIG522 #6585 DIG576
PSS/E export: - Option to use the characteristic name (chr_name) for the branch identifier (CKT/ID)/ bus number, area number, …. - if a SVS is in station controller the Q distribution is not correctly calculated. - if a generator is a slack controls remotely a busbar => not possible in PSS/e => set to actual local voltage control. -Droop control of SVS/ElmGenstat/ElmAsm(DFIG) not correctly exported. -all generators at the same busbar must have the same control settings (IREG, VS => also PQ machines). - IEEE Controller: Parameter mapping is not correct for "avr_AC8B" model.	New option available "PSS/E Bus Number": - Automatic (bus numbers automatically assigned) - Use Serial Number - Use Characteristic Name Problems solved.	#6605 #6612
Neplan import: Some connection lines are not drawn.	Problem solved.	#6572
CIM ENTSO-E 2009 corrections II	Problem solved	#6415

2.1.11 DPL

Description	Solution Note	ID
ComExit.Execute() crashes PowerFactory.	Problem solved.	#6620
GetControlledNode(bus,…) (ElmSym/ElmGenstat/ElmSvs/ElmAsm(DFIG)) not correctly working for bus=-1	Problem solved.	#6618

2.1.12 Miscellaneous

Description	Solution Note	ID
Calculate results for all breakers: PowerFactory crashes if element with neutral exists.	Problem solved.	#6479 DIG539
Internal topology error if the phase technology of two terminals are differed and are connected with a reduced switch.	Problem solved.	#6482 DIG539
Network Reduction: Extremely slow if option: "Calculate results for all breakers" is enabled.	Problem solved, performance improved.	#6480
Merge Tool: Hidden objects are not correctly merged.	Problem solved.	#6462
Result file export to Comtrade leads to inconsistent files.	Problem solved.	#6632
Cubicle (StaCubic): Syntax: "e:cpCB:0" returns wrong breaker.	Problem solved.	#6515

Description	Solution Note	ID
Data Verification (ComCheck): Check missing when the number of circuits/earth wire have been changed in the tower type and the line coupling is not up-to-date.	Problem solved.	#6533
ComExit=> Execute leads to "connection to license server lost" error message.	Problem solved.	#6613
Improved demo examples for Reliability	The DEMO examples for the Reliability assessment are improved.	#6627
Template Library Improvements	- All Templates: Active Power Reduction was not limited, is now limited to 0..1 - All Wind turbine templates are now ready to connect (HV side of transformer). - All DFIG: Active power return of DFIG is now modelled via PT1 behaviour (parameter: Tramp), no jump of active power after fault. - All DFIG: Initialisation improved (xr). - Names of DFIG 2.5MW and Fully rated WTG 2.3 and 5MW corrected.	#6616
Online help	Online help improved.	#6600
Virtualisation: Hardlock license server available within VMWare virtualized machine.	Problem solved.	#6685