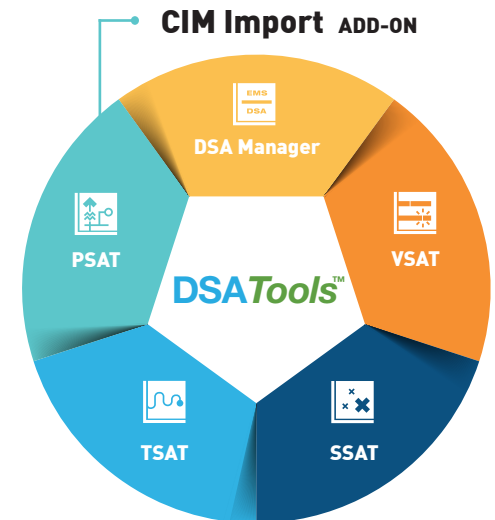# CIM Import   Common Information Model Import

The CIM Import module is an add-on function for PSAT (Powerflow & Short-circuit Analysis Tool), which is able to import data compatible with Common Information Model (CIM) version 14, 15, and 16+.

CIM Import ADD-ON

DSATools™
- DSA Manager (EMS/DSA)
- PSAT
- VSAT
- SSAT
- TSAT

The CIM Import module is capable of building powerflow data from CIM in either bus/branch or node/breaker format. The module is made to support both off-line powerflow analysis and on-line dynamic security assessment (DSA).

APPROACH

The CIM Import module follows these standards to extract and build powerfow data from CIM:

- IEC 61970 (Energy Management)
- IEC 61968 (Distribution Management)
- IEC 62325 (Service Oriented Architecture)

Custom CIM extensions can also be incorporated.

The CIM Import module considers the following data from the above standards:

- **Equipment:** all network components defined in the supported CIM versions are included in the powerflow case.

- **Topology:** the resulting powerflow case is based on the bus/branch format. The node/breaker model is added if data is provided.

- **Steady-State Hypothesis (CIM16+):** status of all network components, as well as generation and load values, are extracted and included in the powerflow case so that a flat powerflow solution can be performed.

- **State Variable:** bus voltages, shunt settings, transformer tap ratios, etc. are obtained for powerflow solution and analysis.
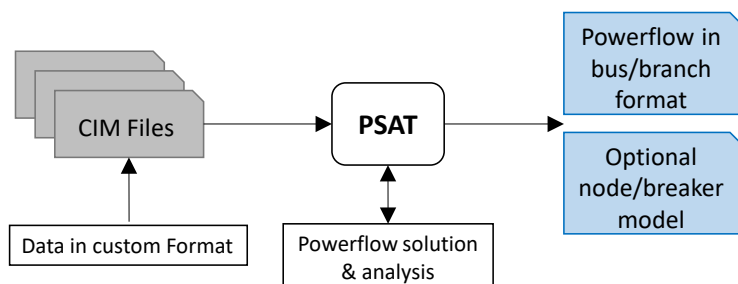
PRODUCT FEATURES:

- *Add-on module for PSAT*

- *Support CIM14, CIM15 and CIM16+*

- *Create powerflow model in node/breaker or bus/branch format*

- *Capable of incorporating third-party customization*

- *Capable of integration with real-time CIM from EMS for on-line dynamic security assessment (DSA)*

CIM Files → PSAT → Powerflow in bus/branch format / Optional node/breaker model

Data in custom Format → CIM Files

PSAT ↔ Powerflow solution & analysis

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APPLICATIONS

The CIM Import module can be used for a variety of applications, including:

- Powerflow analysis.
- Topology analysis: the CIM Import has a tool able to collapse buses connected by breakers/switches so as to reduce the zero impedance lines in the resulting bus/branch model.
- All network components have equipment names assigned in the powerflow case. This enables the integration of the DSA*Tools*™ functional modules (VSAT, TSAT, and SSAT) for online DSA.

Original file definition

Bus 1

Bus 2

Buses collapsing

PSAT Integration

Bus 1
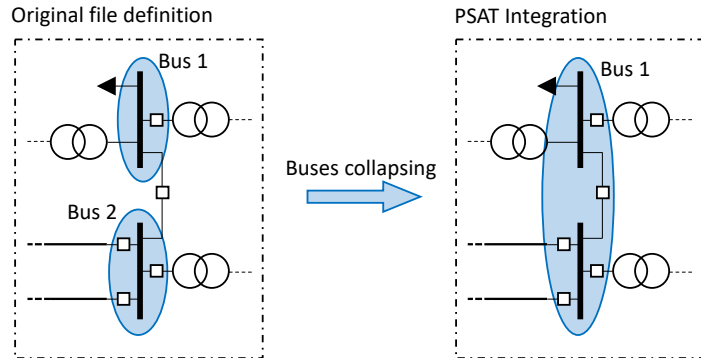
SPECIFICATIONS AND REQUIREMENTS

- Runs on MS Windows 7/10/server 2012 R2/server 2016
- Requires PSAT to run

OTHER POWERTECH SERVICES

- Licensing of the power system analysis software package DSA*Tools*™
- Licensing of other software products for utility applications
- Implementation of on-line dynamic security assessment (DSA) systems
- Development of custom software systems
- Development of models for use in power system analysis
- Generator field testing, model development and validation
- Training

- Technical consultancy studies including
  - Development of power system base cases
  - System planning and operation studies
  - Facility (including renewables) interconnection studies
  - Compliancy studies (such as NERC TPL, CIP, UFLS, etc.)
  - Post-mortem analysis of system disturbances

ABOUT POWERTECH LABS

Powertech Labs Inc. is one of the largest testing and research laboratories in North America, situated in beautiful British Columbia, Canada. Our 11-acre facility offers 15 different testing labs for a one-stop-shop approach to managing utility generation, transmission and distribution power systems.

Outside of the utilities industry, Powertech provides routine testing capabilities, product development, research and consulting services to support an array of industrial-type operations, electrical equipment manufacturers and automotive original equipment manufacturers.

www.powertechlabs.com

FOR MORE INFORMATION CONTACT:

Xi Lin – 604.590.6652
Director, Power Systems
xi.lin@powertechlabs.com

dsainfo@powertechlabs.com
www.dsatools.com

81022-0043A

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