DSATools™
Dynamic Security Assessment Software

Powertech

WECC MVS Updates

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Releases

- Minor release (v23.2) on **March 5, 2024**, next minor release early June (23.3)
- Targeting major release (v24) **mid-July**
- Release schedule:
  - From v22 onward transitioned to scheduled releases (3 minor releases/year, e.g., v22.1, v22.2, v22.3, 1 major release e.g. v23)
  - Minor releases will generally include fixes/model support/small enhancement requests, major release cycle for public release of more significant features
- Presentation focused on TSAT (SSAT/VSAT/PSAT updates not included unless there is overlap)

TSAT – Some 23.2.x changes (minor release)..

- No disturbance/flat run testing mode in TSAT will summarize MW/MVAr variations across generators (instead of just speed)
- Additional ROCOF calculation methodology selectable ("Head-Tail" option with configurable time window)
- Increased # of dynamic files supported to 100
- Model-output dependent dynamic representation (netting)
- Additional load-flow based PPC control modes and fixes
- Some fixes to help issues when writing swap/temp files to OneDrive folders (with option to disable) and in general improved robustness to avoid interference from anti-malware/anti-virus scanners

User-Defined Modeling – Some 23.2.x changes

- User-defined modeling updates:
  - Monitoring: MVA qty and additional metered-end specification
  - Ramp tracking filter block (TSAT, SSAT)
  - IEEE/CIGRE DLL model format support updates/fixes
  - Encrypted UDMs in TSAT/SSAT can no longer monitor internal quantities (just developer-specified “device signals”)
    - States identified numerically in SSAT, e.g., for sensitivity analysis

Upcoming (v24) - July

- Some upcoming features
  - Transfer algorithm updates
    - dynamic phase shifter + HVDC participation
    - more precision in pre-determination of interface/boundary limits
    - automatic source selection by boundary
    - automatic step updates to hit gen pmax
  - Combinatorial logic for contingency dependencies
  - Distributed computation capability added to SSAT
  - Increased renewable modeling flexibility for SSAT
  - Additional renewable, exciter, OEL/UEL model support

Contact Info

- General Inquiries
  - Contact Powertech Lab's DSATools team at dsainfo@powertechlabs.com
- DSATools™ Website

  www.dsatools.com