



TSAT ARCHITECTURE

WILL TOOTLE

NOVEMBER 2021 JSIS

*Working together to responsibly and economically
keep the lights on today and in the future.*



SouthwestPowerPool

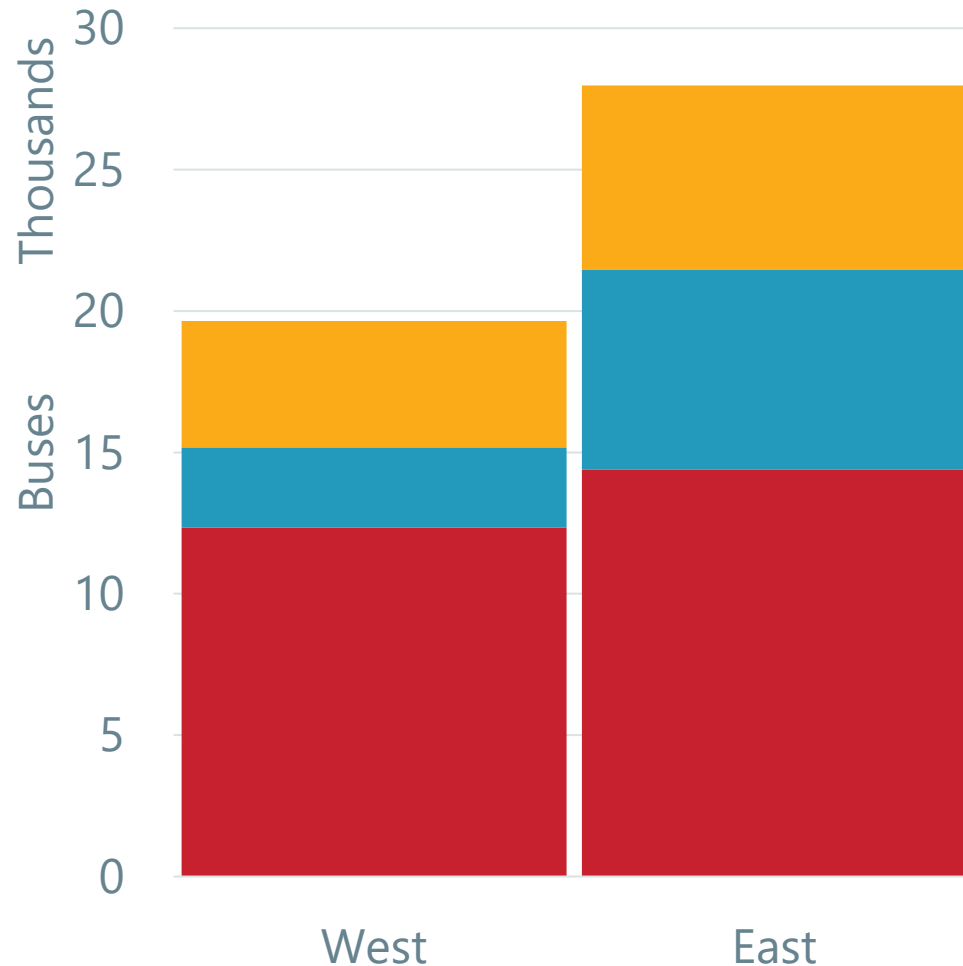


SPPorg



southwest-power-pool

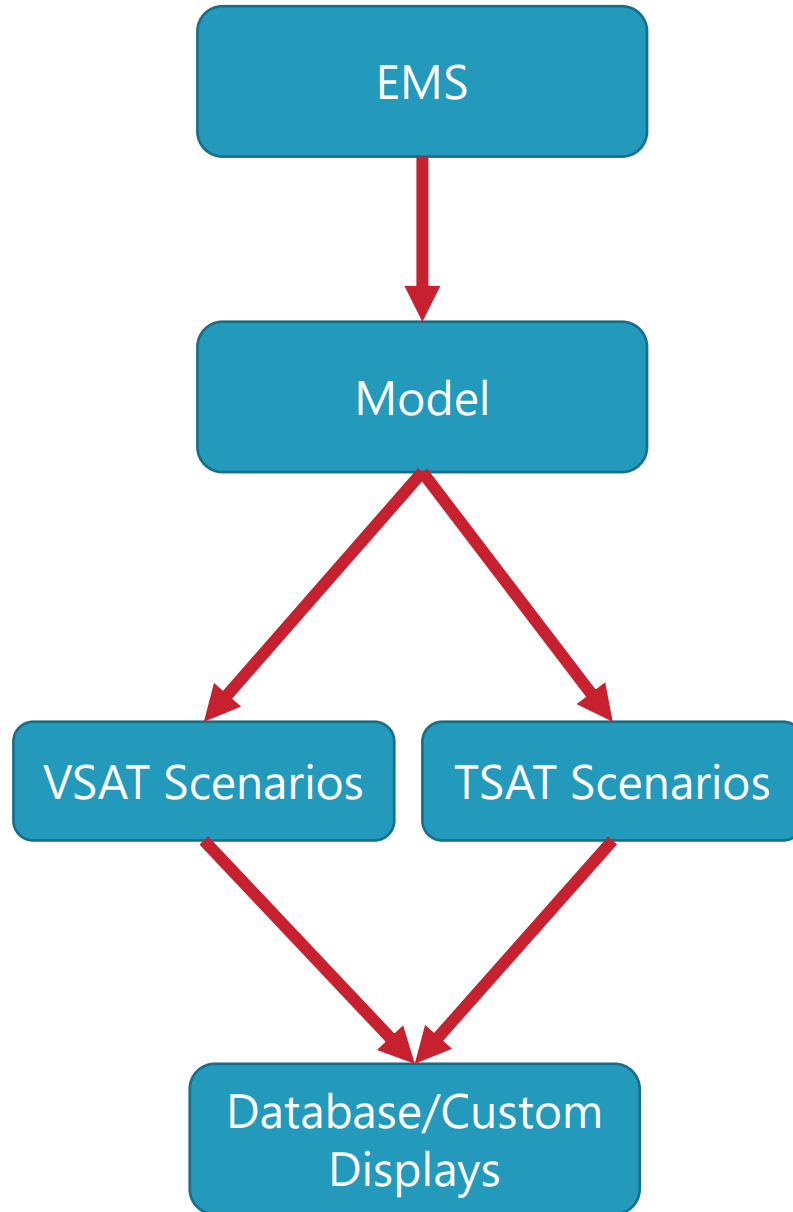
NETWORK MODEL SCOPE



- Western Interconnect is fully represented in the model
- Eastern Interconnect is partially represented
- East model 20% larger
- Model is split into three “tiers”
 - RC footprint
 - Neighboring BAs
 - External BAs

MODEL SIZE

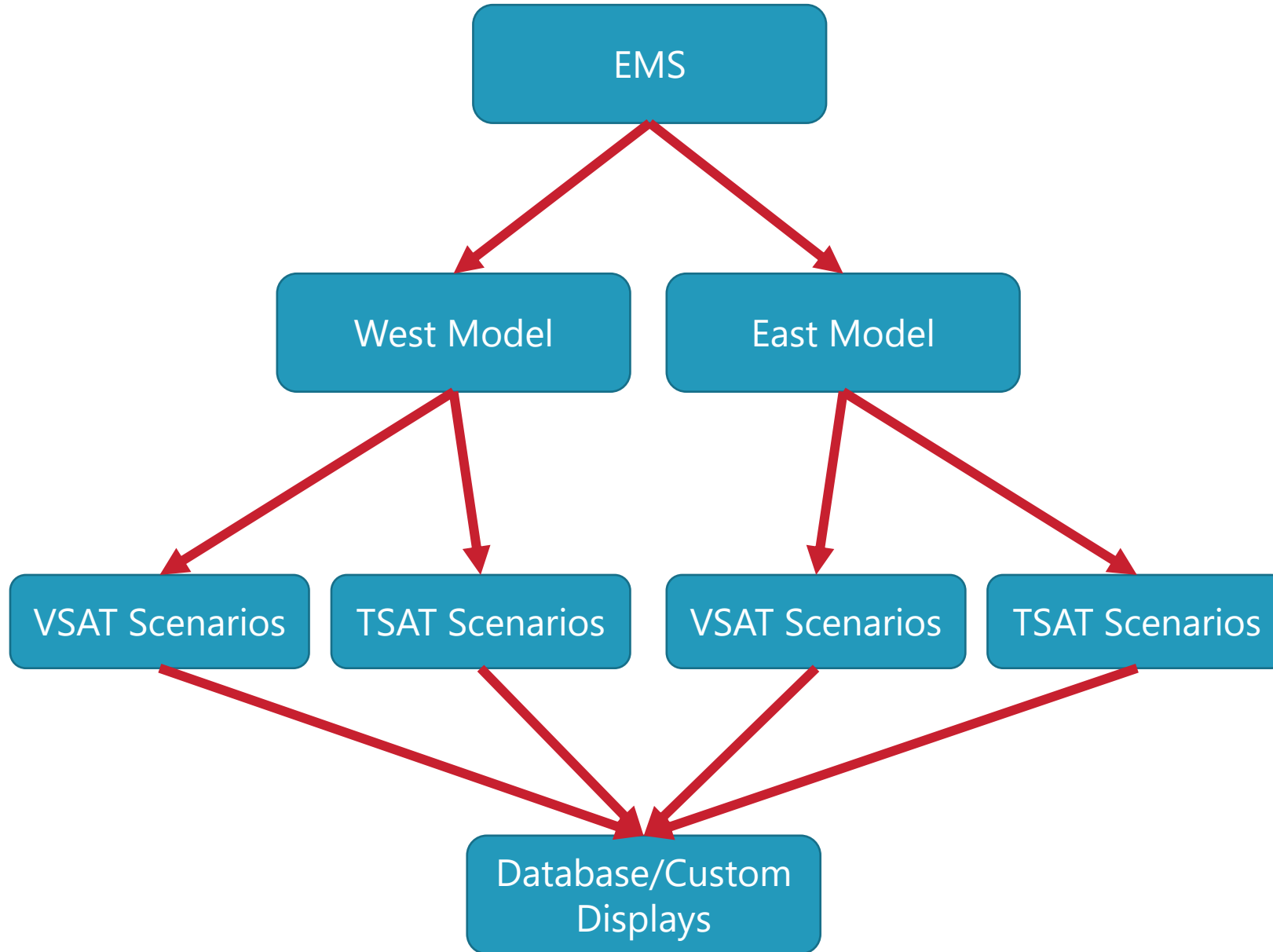
- 160,000 Statuses (Stations with CB coverage)
- 140,000 Analogs (Stations with full MW SCADA coverage)
- 38,000 Buses
- 115 Areas
- 10,000 Contingencies
- 8,100 Monitored Elements



192 cores for VSAT (168 RT, 24 ST) (per site/environment)

192 cores for TSAT (20 BC RT 44 TC RT, 40 BC LA 88 TT LA,)

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192 cores for TSAT (20 BC RT 44 TC RT, 40 BC LA 88 TT LA,)



TSAT EVALUATION

- EMS model mapped to WECC planning case
- Updated results every 10 minutes
- Model maintenance required due to regular updates