

LineVision's Approach to Secure Dynamic Line Ratings



LineVision's DLR is Secure-By-Design

In partnership with our clients, LineVision has developed a solution that has been validated and confirmed by dozens of security and compliance teams

Transmission Owners can trust LineVision's secure-by-design approach to meet NERC CIP requirements and safely deliver the critical information needed to grow grid capacity and resilience.



LineVision's Approach to Security

LineVision's DLR incorporates all the benefits of sensor feedback while removing three key security concerns:



Data Integrity

LineVision's data scientists manually review all data inputs, including sensor data, 3rd party weather data, and topology data. This step permits rigorous validation and analysis of all inputs to ensure the accuracy and quality of the trained model.



Data Confidentiality

The only data required for calculating operational DLR values is weather, which can be classified as Public Information and poses zero confidentiality risk for the Transmission Owner.



System Compromise

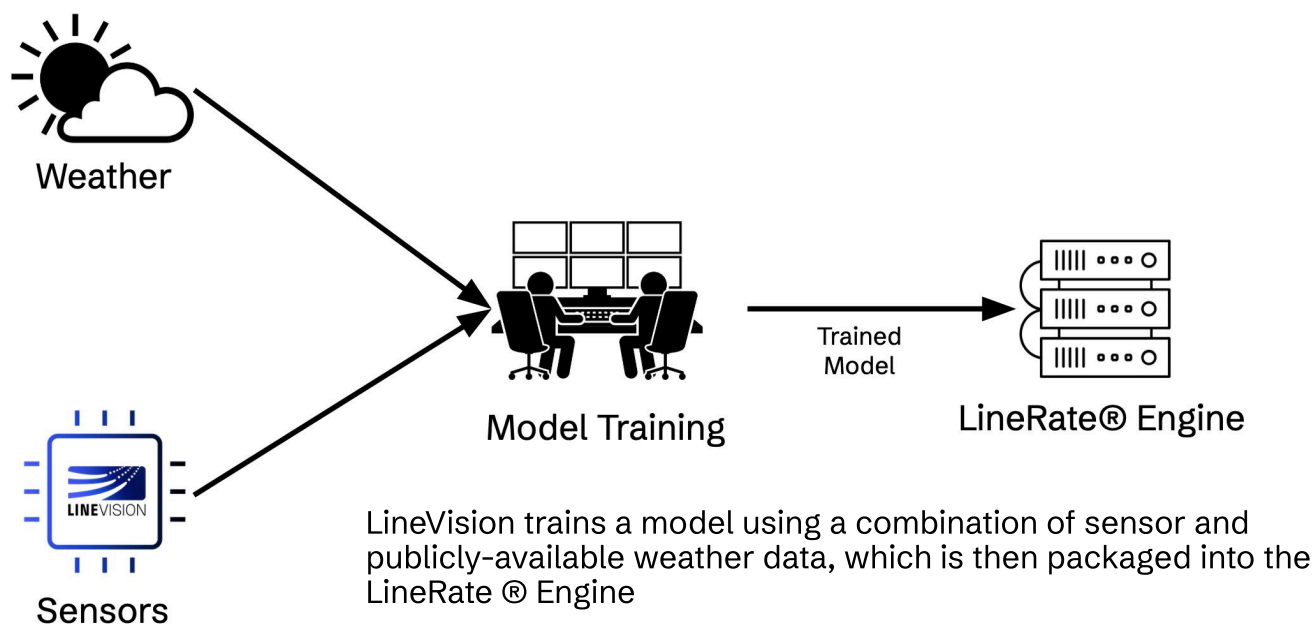
There is no pathway from sensors to the EMS, which greatly reduces or eliminates supply chain risk.



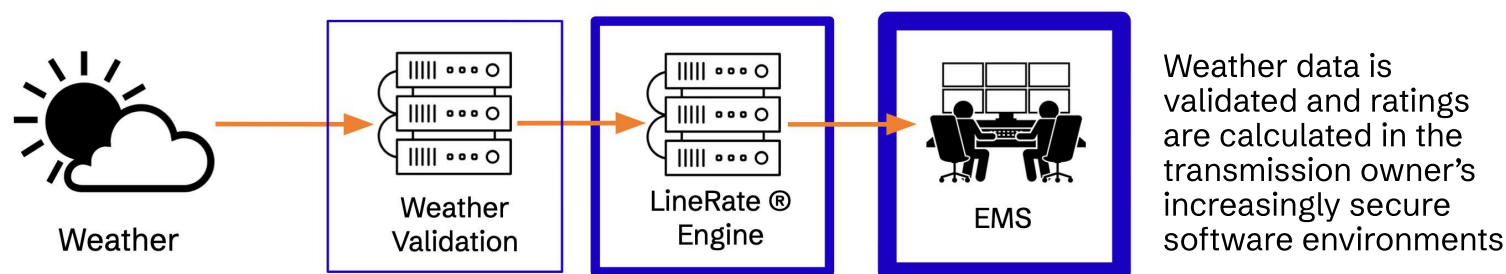
LineVision's DLR supports NERC CIP Compliance

How LineVision Secures Transmission Owner's Data

LineVision pulls sensor data (along with publicly available weather and topology information) into its data analytics platform, where it is reviewed and validated by our data science team before being used to train a DLR model. This trained model is then packaged up into LineVision's LineRate Engine.



All logic and intelligence are under the Transmission Owner's control and are deployed in adherence to their own security and compliance standards. Aside from wind speed and wind direction, which can be independently verified for accuracy, the LineRate Engine is packaged with all the information it needs to calculate DLR and any other advanced ratings.



Transmission Owners typically place the LineRate Engine within their high-security SCADA environment, while others may place it in their corporate environment.

Regardless of their approach, utilities have control over the operation of the LineRate Engine and can apply the security controls that they deem appropriate. With no external sensor data in the operational data flow, Transmission Owners have a straightforward pathway for completely avoiding sensor risk and for supporting compliance with NERC CIP requirements.