EMPOWERING ENERGY INTEGRATION

CIM Adapter

Put Your Grid Model to Work in AVEVA PI

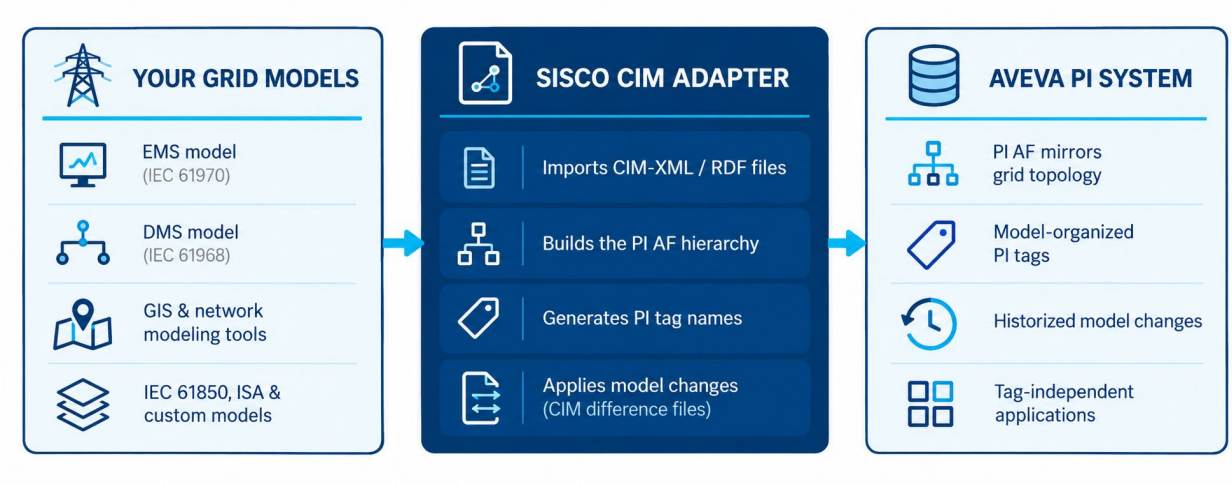
If your organization runs AVEVA PI, your historian holds thousands of tags but no picture of how the grid connects them. SISCO CIM Adapter imports your CIM-based power system model directly into PI Asset Framework (PI AF). Your historian finally reflects your network topology, and when the model changes, CIM Adapter keeps PI in sync.

The Challenge: Tags Without Context

PI stores measurements as tags. Applications must be pre-programmed with those tag names, and someone must rebuild PI AF by hand whenever the network changes. The result is brittle analytics and a historian that drifts away from the models your EMS, DMS, and GIS teams already maintain.

Why It Matters

- **PI System administrators:** Replace manual PI AF builds with configuration driven by the model of record.
- **Operations analytics teams:** Write reusable analytics that reference equipment, not hard-coded tag names.
- **Utility model engineers:** Maintain one CIM model and let it organize the historian.
- **System integrators:** Deliver standards-based PI integration for EMS, DMS, and GIS projects without custom mapping code.



Key Capabilities

- **Model-driven PI AF configuration.** Imports model information and network connectivity into PI AF using CIM-XML files.
- **Find equipment, not tag names.** An enterprise semantic model lets PI applications locate a transformer within a substation without knowing tag names in advance.
- **Automatic PI tag naming.** Auto-creates PI tag names based on the model definitions.
- **Incremental change management.** Updates tag names without manual configuration when the model changes.
- **Model synchronization and historization.** Synchronizes PI AF with external power system models using CIM difference files or request messages containing CIM Instance Data changes, so model changes are historized in PI.
- **Flexible model sources.** Works with customer-defined models, models derived from other applications, or standard models: IEC 61970 (EMS), IEC 61968 (DMS), IEC 61850, and ISA.

Standards and Formats

- **CIM:** IEC 61970 (EMS) and IEC 61968 (DMS)
- **Other models:** IEC 61850, ISA, and customer-defined models from GIS, PSS/ODMS, CIMDE, and other XML-based tools
- **File and message formats:** CIM-XML, RDF, RDFS, OWL, CIM difference files, and CIM Instance Data messages

Specifications

- **Target platform:** AVEVA PI System (PI Server and PI Asset Framework)
- **Operating system:** Any currently supported Microsoft Windows operating system
- **Components:** CIM Adapter and import tool
- **Optional integration:** SISCO Utility Integration Bus (UIB) for continuous model synchronization across GIS, EMS, DMS, and network modeling tools

Why SISCO

SISCO engineers participate in IEC TC57 Working Groups 13 and 14, which define CIM for EMS and DMS, as well as the UCA International Users Group and the IEEE CIM Task Force. Since 1983, SISCO has delivered standards-based integration for IEC 61850, ICCP-TASE.2, IEEE COMTRADE, and CIM. CIM Adapter is built by the people who help write the standards it implements.

Get Started

Ready to see your grid model in AVEVA PI? Contact SISCO to request a technical demo, discuss licensing options, or get answers from the engineers who built CIM Adapter.

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