GRIDSCALE X ADVANCED PROTECTION ASSESSMENT

PowerBase Bridge

Exchange protection setting data between third-party Doble PowerBase and Advanced Protection Assessment (APA). Make it easier to review settings and synchronize both systems with same relay records.

SIEMENS

At a glance

The PowerBase Bridge allows Gridscale X Advanced Protection Assessment (APA) customers to import protection setting data from the Doble PowerBase software to APA. The PowerBase Bridge uses the relay manufacturer's native relay setting files stored in the Doble PowerBase software to transfer relay setting data to relay instances in APA.

The challenge

Doble PowerBase™ (PowerBase) is a protection data management software that integrates protection and maintenance data into a central database that supports office-to-field processes, including protection setting management.

Protection setting information in the field requires to be analyzed for continuous conformity and coordination. For customer licensing both APA and PowerBase, the transferring of the protection data from the relay setting source of truth (PowerBase) to the protection setting analyzer (APA) has been done manually. This process, besides being slow, is also prone to human errors.

Our solution

The PowerBase Bridge connects with PowerBase Web API to read relay setting information stored in PowerBase database.

Mapping between substation and relay information in PowerBase to similar information in APA assures that the data from the same equipment is prepared for exchange.

Once this identification is done, APA processes the relay manufacturer's native relay setting file and incorporates this information into an APA relay instance already mapped for correspondence.

Since APA relay models contain relay setting names and ranges similar to the content of the native relay setting files, the transferring of the relay setting information is one-to-one.

Currently, connection to the PowerBase DLL API is not supported.

Bridge Configuration

To use the interface, you need an active APA license that includes the PowerBase Bridge. You also need a Doble PowerBase Web API license. Contact your Doble PowerBase support team for license information and for help configuring the PowerBase Web API connection.

The minimum software versions that support the PowerBase Bridge are APA 16.0.4 and PowerBase 7.2.1.94.

Supported Manufacturer's Relay Setting File Formats

The main purpose of the bridge is to read manufacturer relay setting files stored in PowerBase and apply those settings to the matching relay setting group in APA. APA currently supports the following manufacturer relay setting file formats:

- XML and TEAX files for Siemens relays
- RDB files for Schweitzer/SEL relays
- CSV files for Schneider relays
- URS and XML files for GE relays
- XRIO files for ABB relays
- CSV files for Areva/Alstom relays

Using the PowerBase Bridge, the APA user can download a file from PowerBase, read it in APA, and apply the setting values to the corresponding APA relay instance and relay setting group.

Mapping between PowerBase and APA

The PowerBase Bridge possesses forms the allows easily map substations and relays in PowerBase and APA that correspond to the same equipment.

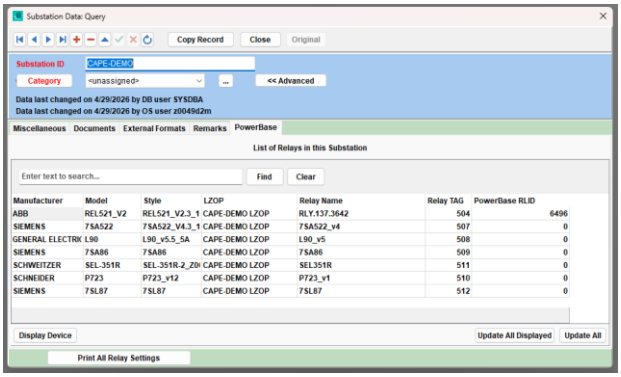

Figure 1: Substation and Relay Mapping in APA Bridge for the same equipment in PowerBase

Processing Relay Setting Files

After a relay is mapped, the PowerBase Bridge can read and process the associated native relay setting file stored as attachments in PowerBase.

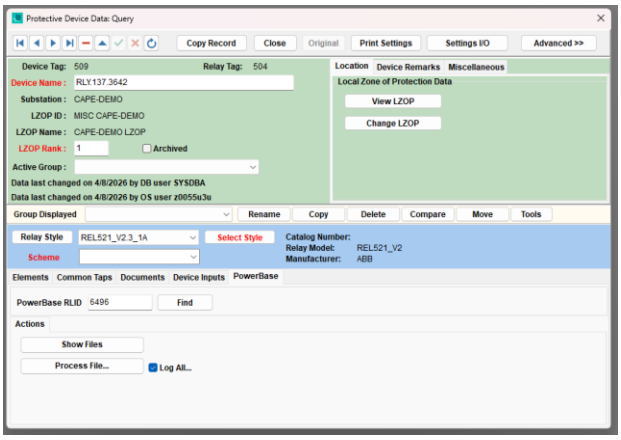

Figure 2: Native setting file stored in PowerBase ready to be processed by the PowerBase Bridge

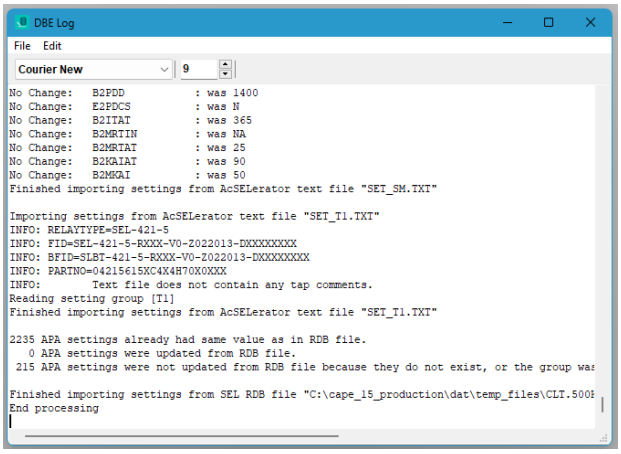

Figure 2: Transfer Complete between PowerBase and APA

PowerBase Bridge in Action – Features

- Easy connection configuration between APA and PowerBase Web API.
- Easy to use forms to map substations and the relays in substations in both APA and PowerBase, for correct transfer of relay setting information.
- Supports native relay setting files of the most popular relay manufacturers in the market.
- Easy transferring of relay setting data that takes only seconds.

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