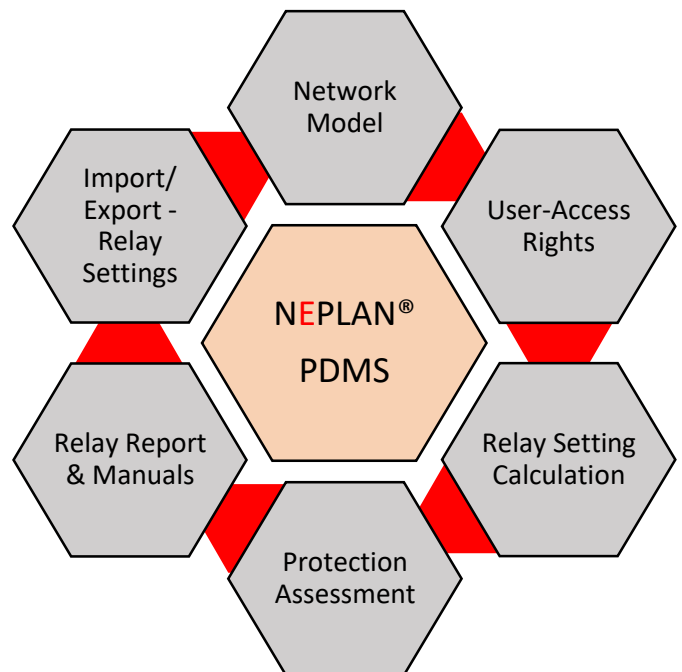
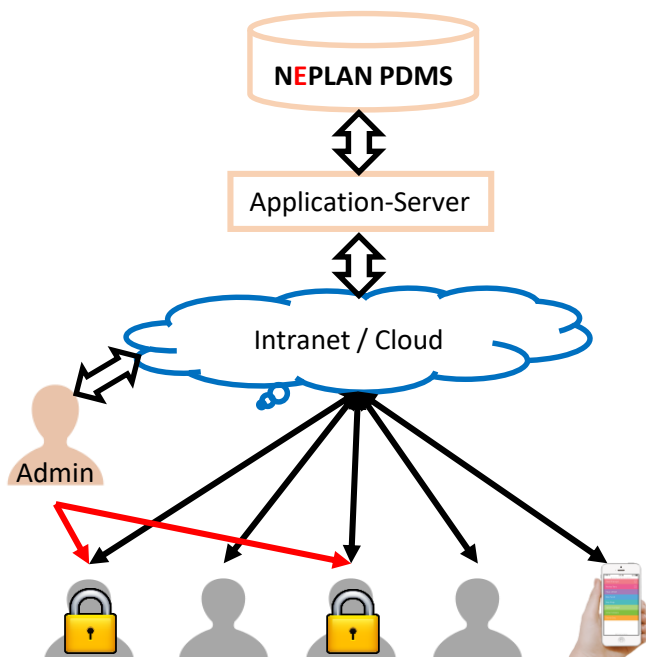


## NEPLAN® Protection Device Management System (PDMS)

State-of-the-art multi-user centralized database management for protection devices

<b>Challenges</b>	Maintaining centralized relay setting workflow, associated documents such as manuals and relay reports, unauthorized access to the relay settings, etc.
<b>Customer</b>	Any kind of utility or industrial customer who intends to create and maintain a centralized protection database management system
<b>Advantages</b>	Provides system security to the power system operations and management. Ensure correct functioning of protection devices with proper discrimination
<b>Solution</b>	Multi-user database with user-access control for network model and protection devices providing direct interface to the simulation results

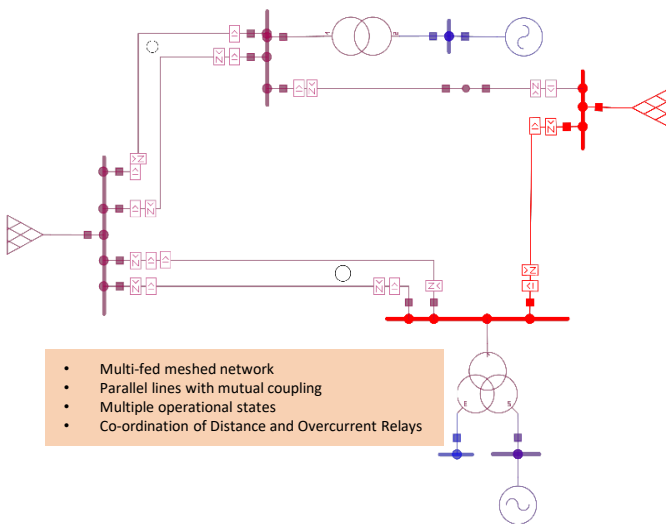


### PDMS Features

- Access to network model for all calculations
- Relay co-ordination studies and assessment
- Maintain history or workflow status of all the changes made to the network and relay settings
- User access to protection devices based on their roles and rights
- Management of protection device library
- Users have the possibility to locally save the project, work on it and later merge the changes

### Relay Parameter Management

- Import/Export of relay settings file
- Relay report with characteristics
- Import relay datasheet/manual/handbook
- Import all other relay parameters not relevant to the setting calculation
- Import/Export COMTRADE file
- Retrieve protection device settings as well as simulation results on NEPLAN Mobile App



## Calculation Modules

- Overcurrent Protection – Selectivity Analysis
- Distance Protection – Tripping Schedule
- Protection setting calculation tool
  - Optimal setting of relays under all operating states
  - Co-ordination of distance relays and overcurrent relays
  - Based on sensitivity considering infeed and mutual coupling factors
- Protection Assessment
- Protection device generic model for dynamic simulation using macro language

## Device Library and Relay Template

- An extensive protection device library of overcurrent relays, circuit breakers and fuses of more than 4000 types from different manufacturers
- Definite time, inverse and user-defined curves for time-current characteristics to define relay functions
- NEPLAN offers a customizable MS-EXCEL template by means of which the relay data can be imported in the database
- Import of vendor specific XML setting file is also possible

## Advanced Protection Functions

- Busbar differential protection
- Line differential protection
- Restricted earth fault protection
- Transformer differential protection
- Generator differential protection
- Power swing protection
- Inadvertent energization
- Pole-slip
- Motor differential protection
- Motor overload protection
- Import of COMTRADE data for fault finding analysis