

BDNS - BESSY DEVICE NAME SERVICE

MOTIVATION

BDNLS, is a prototype database tool, currently under development. It's based on extensible configurations defined in XML. Profiles encapsulate complex SQL navigation paths to a element or device.

FEATURES

- Display detailed element/device properties
- Configurable tree navigation
- Popup menus, data update wizards
- XML configuration, generic executable code

DEVELOPER GUIDELINES

- Search, read, change, and insert DB elements.
- Tool for users without knowledge of SQL.
- Importing and exporting of huge data sets.
- Profile contains navigation chain to a target element, element properties, wizard and the popup-menus.
- Profiles that allow for changes during operation.
- Complexity of the data structures and SQL-queries is encapsulated in configuration files.
- Generic source code.
- Independent of the application, with respect of the given data structure.
- Own SQL-queries can be stored in the configuration file.
- JAVA provides a platform independent application.

GUI OF THE APPLICATION

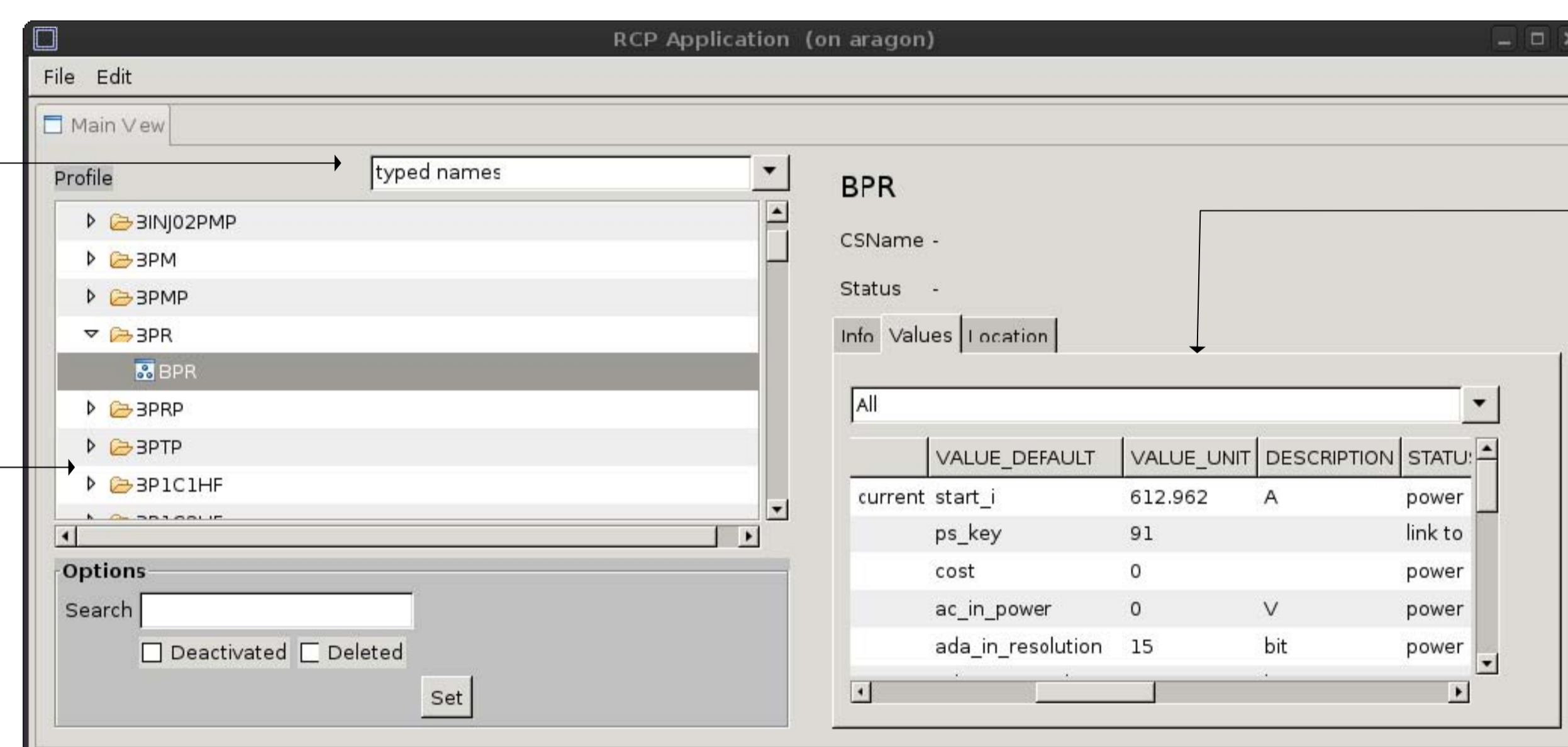
Profile -Section

The profile enables to switch the supported navigation chain to an element and the detailed properties of an element on operation.

<navigation> <tree> - section

The navigation tree section encapsulate a chain of SQL queries. The results of every SQL call is presented as a single tree element.

The Query section (not visible) defines which column represented the name, the description of the tree item and which SQL-keys to be stored.

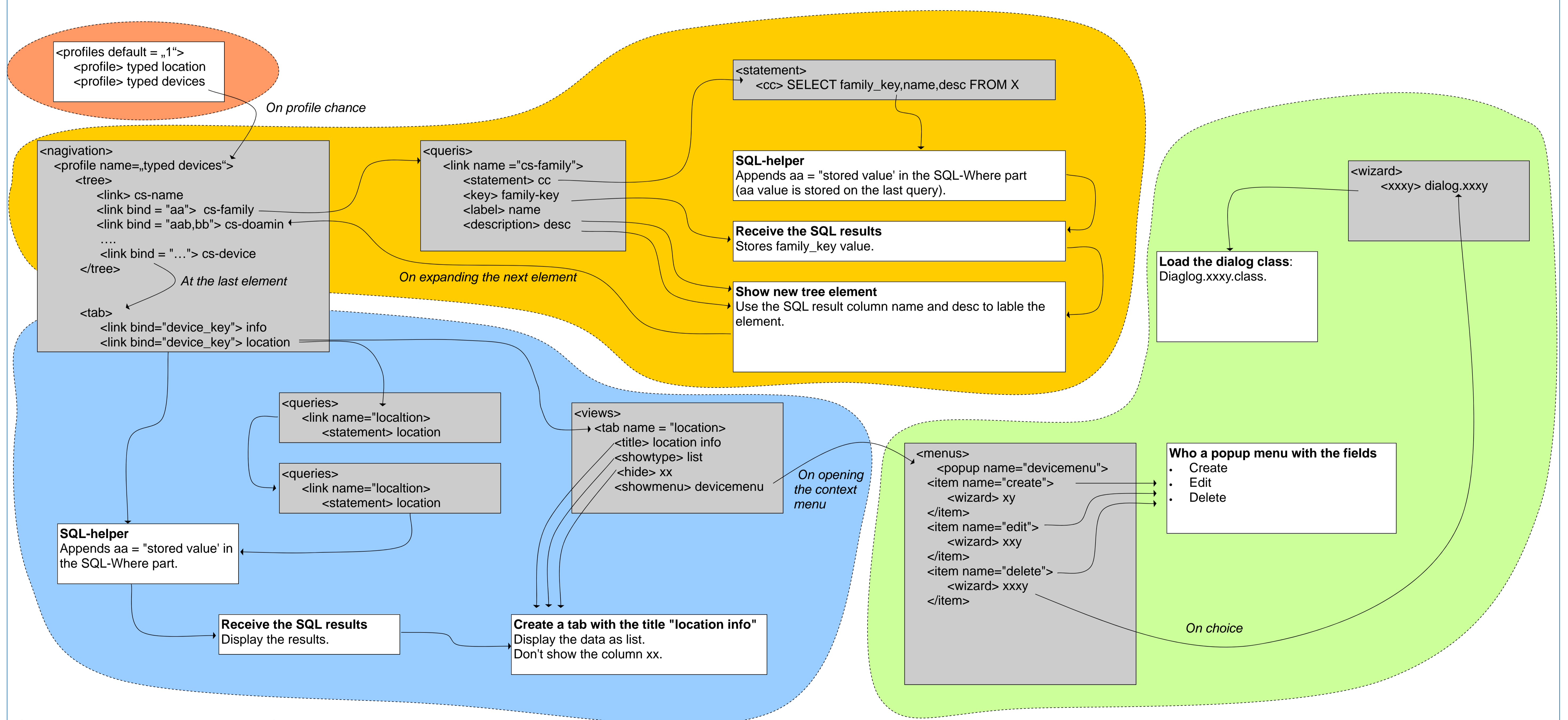


<navigation> <tab> and view section

The navigation tab describes which device properties are available. For example a SQL query to the location of a device and a SQL query for electrical setting of a device.

The View section describes how to present the results of the SQL call. For example the title of the tab, hidden columns, list or form view of the data.

DATA FLOW AS CONFIGURED BY THE XML FILE*



* (XML Tags are presented with open tags)

[1] T. Birke et al.: Relational Database for Controls Configuration Management, IADBG Workshop 2001, San Jose.
 [2] T. Birke et al.: Beyond Devices - An improved RDB Data-model for Configuration management, ICALEPCS 2005, Geneva.
 [3] T. Birke et al.: Introducing I/O Channels into the device database open new potentialities for configuration management, ICALEPCS 2001, WEDT003.
 [4] Jan Hatje, M. Clausen et al.: CONTROL SYSTEM STUDIO (CSS), ICALEPCS07, Knoxville, Tennessee, <http://cs-studio.sourceforge.net/>
 [5] D. A. Dohan, BNL, Upton: IRMIS UNIVERSAL COMPONENT-TYPE MODEL, ICALEPCS07, Knoxville, Tennessee, <http://aps.anl.gov/epics/irmis/index.php>
 [6] <http://www.aps.anl.gov/epics/>