Controls Configuration Service

Future CCS applications with ACW

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on behalf of CCS team
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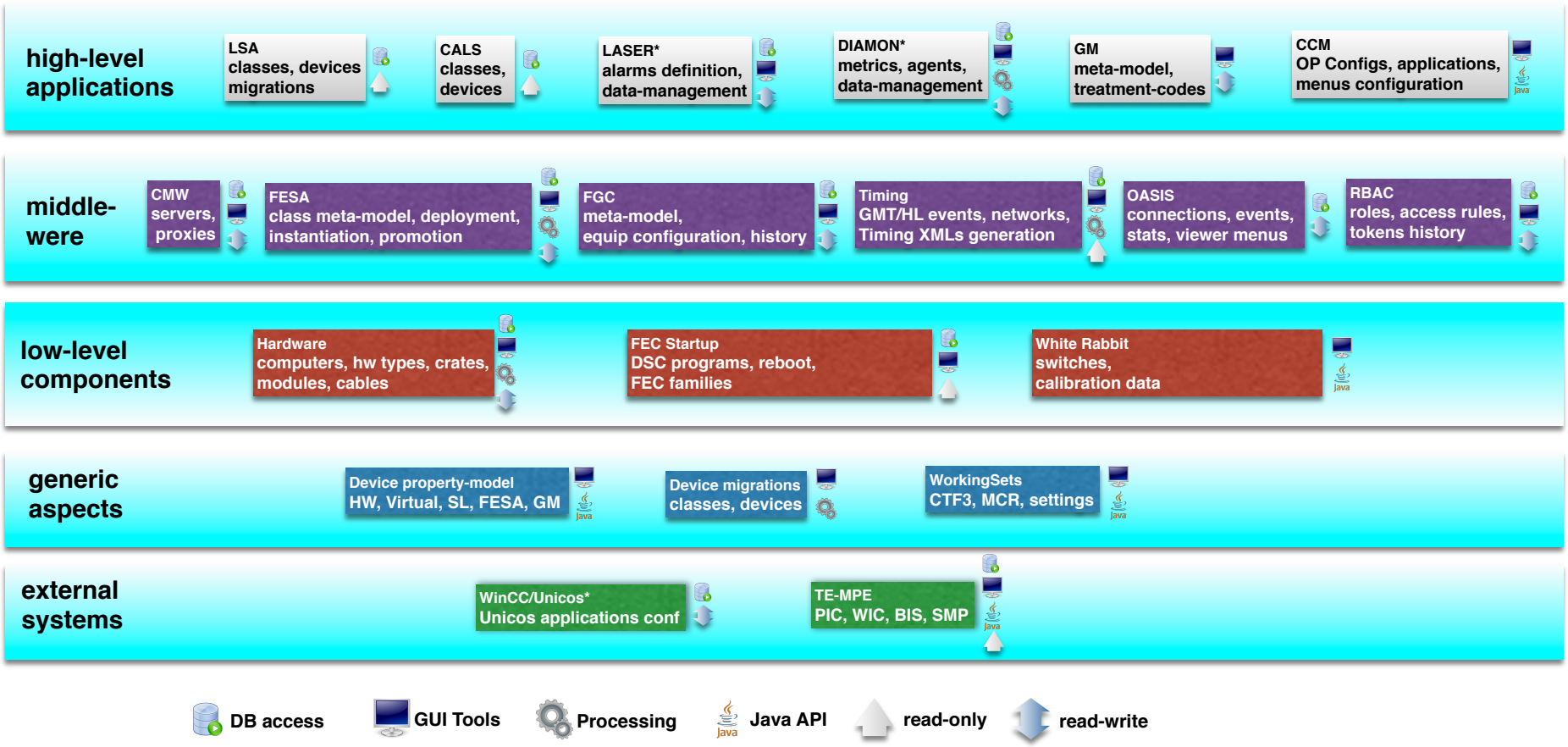
The Controls Configuration Service

The Controls Configuration Service helps to bind all the Control system layers together by providing complete and coherent configurations.

It is a database oriented system based on:

- an Oracle database (2-node RAC cluster)
- a set of high-level client Java APIs
- database level client APIs (PL/SQL interfaces)
- GUIs based on proprietary Oracle technologies: ADF and APEX
- new generation GUIs based on ACW (Spring, HTML5, AngularJS)

CCS Stakeholders



Major domains and stake-holders of the Controls Configuration Service.
Highlights of the range of provided tools and data-flow.

Current state - APEX & ADF

Last remaining ADF applications (GM, CCM, WorkingSets) are scheduled for suppression during EYETS2016.

ADF stands for Application Development Framework, a JSF/JEE like framework developed by Oracle in 1999 and used in CCS since 2006.

Active development of APEX applications is stopped and only critical bugfixing takes place. Beginning of LS2 is a foreseen end-of-life for the complete APEX suite.

Practically 2 years from now we plan to be free of APEX and provide instead a single application based on ACW stack, developed in established CI and HA environments.

CCDE and future of CCS tools

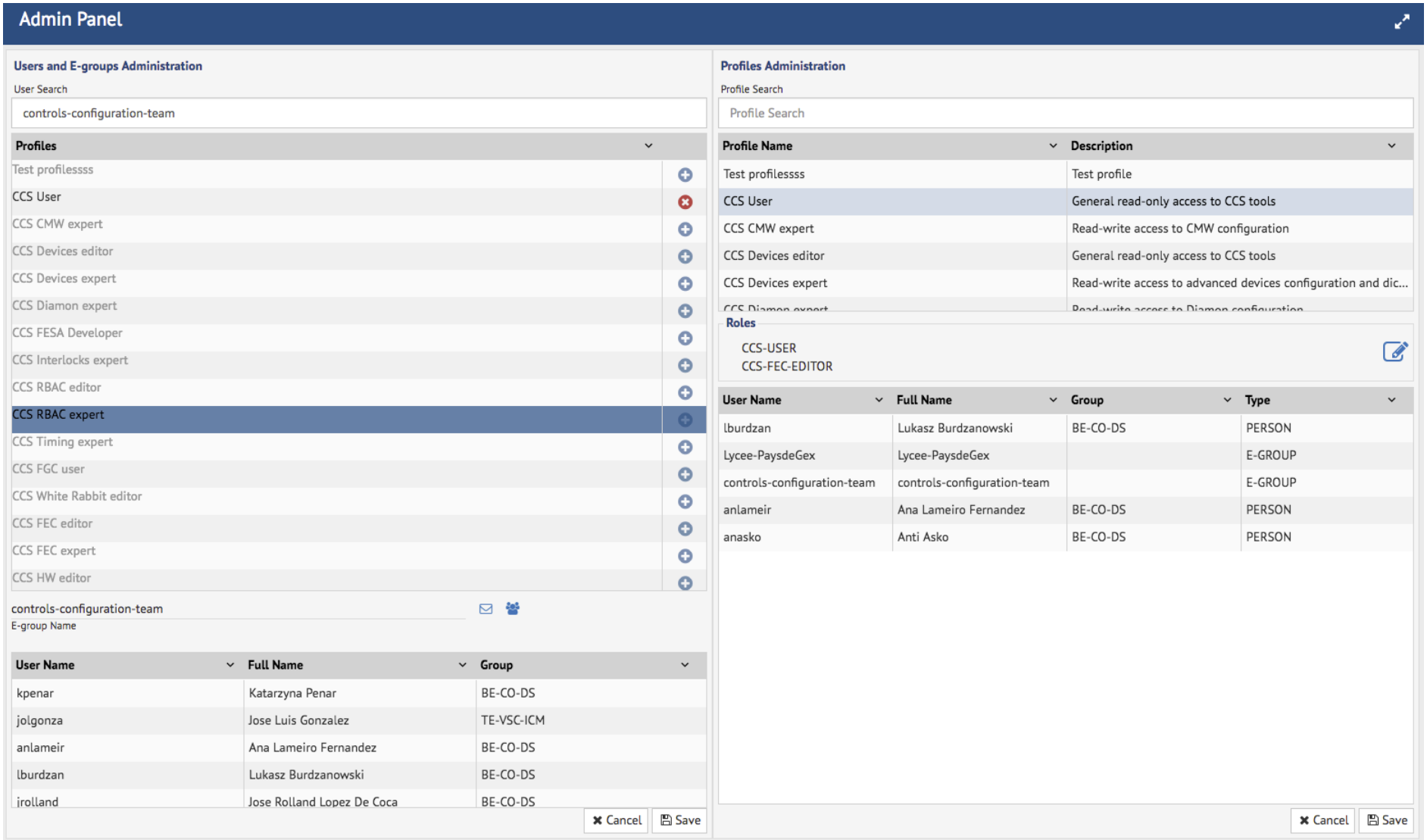
The Controls Configuration Data Editor (CCDE) is a single-page web application implemented based on ACW stack.

The CCDE is designed around user profiles and authorization model giving users access to functions based on their role in the system and strong focus on usability.

As a part of CCDE we are planning to develop domain agnostic features like:

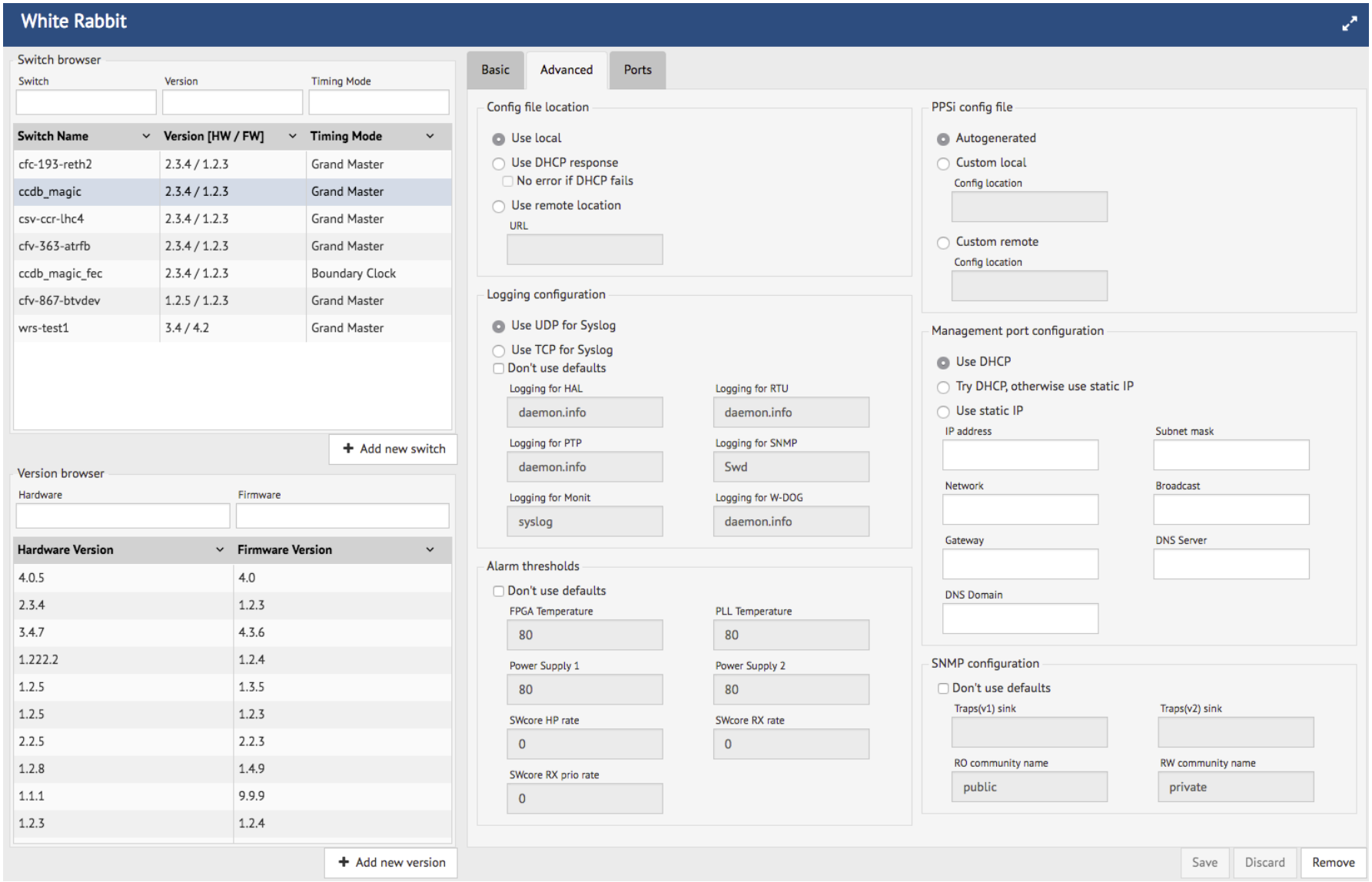
- user home page,
- favorites and recently visited “entities”,
- in-app communication between users (send entity, etc.),
- “spotlight” like search of application pages and views,
- UI components for integration with history mechanism,
- and more…

CCDE Admin panel



CCDE Admin panel providing management of users, their profiles and profiles management.

CCDE White Rabbit switch management view



CCDE WhiteRabbit switches management, switch calibration data management and in future WR networks configuration and visualization using the TVC ACW component.

CCDE History browser

CCS History Browser

HARDWARE | DEVICE | RBAC | OTHER

COMPUTERS | CRATES | MODULES | DSC PROGRAMS DEFINITIONS | DSC PROGRAMS | HARDWARE TYPES

REFERENCE TIME | USER NAME | OPERATION | CRATE_ID | CRATELABEL | COMPNAME

REFERENCE TIME	USER NAME	OPERATION	CRATE_ID	CRATELABEL	COMPNA...	BUS_LOOP	MODULE_CRATE	BUILDING	ROOMCO...	RACK	FUNCTION	LAYOUT_ID	LAYOUT_NAME
2016-09-30 12:58:53.0	mjaussi	U	18728	CFV-864-AGPSB	cfv-864-aglna			864	R-A01	RF2	PSB VXS te...		
2016-09-30 09:00:55.0	mbjork	I	24969	CFC-866-RETH6	cfc-866-reth6			866	1-D17		LABORATO...		
2016-09-30 08:59:48.0	mbjork	I	24968	CFC-866-RETH5	cfc-866-reth5			866	1-C04		LABORATO...		
2016-09-29 14:00:33.0	mbjork	U	24948	CFC-363-AGLEI	cfc-363-aglei			363	R-020	RAF0...	RF GENER...		
2016-09-29 13:04:57.0	mjaussi	I	24948	CFC-363-AGLEI	cfc-363-aglei			363	R-020	RAF0...	RF GENER...		
2016-09-23 14:21:28.0	mbjork	I	24930	CFC-BA1-BISEMIO	cfc-ba1-bis...			868	R-002		PC TO CO...		
2016-09-22 15:21:48.0	mbjork	I	24929	CFC-180-DQFAIR	cfc-180-dqf...			180	R-001		B180 - FAI...		
2016-09-21 17:14:09.0	mbjork	I	24928	CFC-2250-RADA...	cfc-2250-ra...			2250	R-005		Spectromet...		
2016-09-19 09:45:16.0	mbjork	I	24909		cfc-774-cg...								
2016-09-19 09:36:44.0	bninet	I	24908	CFC-193-TELENA	cfc-193-tel...			193	S-H03	TYE01	ELENA SC...		
2016-09-13 14:44:36.0	mbjork	U	24868		cfc-865-mk...								
2016-09-13 06:53:05.0	mbjork	D	24888		cfv-865-mk...								
2016-09-13 06:51:15.0	mbjork	I	24888		cfv-865-mk...								
2016-09-12 11:46:37.0	mbjork	I	24868		cfc-865-mk...								
2016-09-07 15:31:29.0	mbjork	I	24854		cfc-197-tta...								
2016-09-07 15:23:27.0	mbjork	I	24853		cfv-ba2-allt...								
2016-09-07 15:22:59.0	mbjork	I	24852		cfv-ba2-allt...								
2016-09-07 13:16:43.0	anag	U	24851	CFV-400-BPMLN...	cfv-400-bp...			400	1-014	BY12	LINAC4 BP...		
2016-09-07 13:16:11.0	anag	I	24851	CFV-400-BPMLN...	cfv-400-bp...			400	1-014	BY13	LINAC4 BP...		
2016-09-07 13:14:56.0	anag	D	16712	CFV-400-BPMLN...	cfv-400-bp...			400	1-014	BY12	LINAC4 BP...		
2016-09-07 10:02:09.0	anag	U	24850	CFV-400-BPMLN...	cfv-400-bp...			400	1-014	BY11	LINAC4 BP...		
2016-09-07 10:01:26.0	anag	I	24850	CFV-400-BPMLN...	cfv-400-bp...			400	1-014	BY13	LINAC4 BP...		

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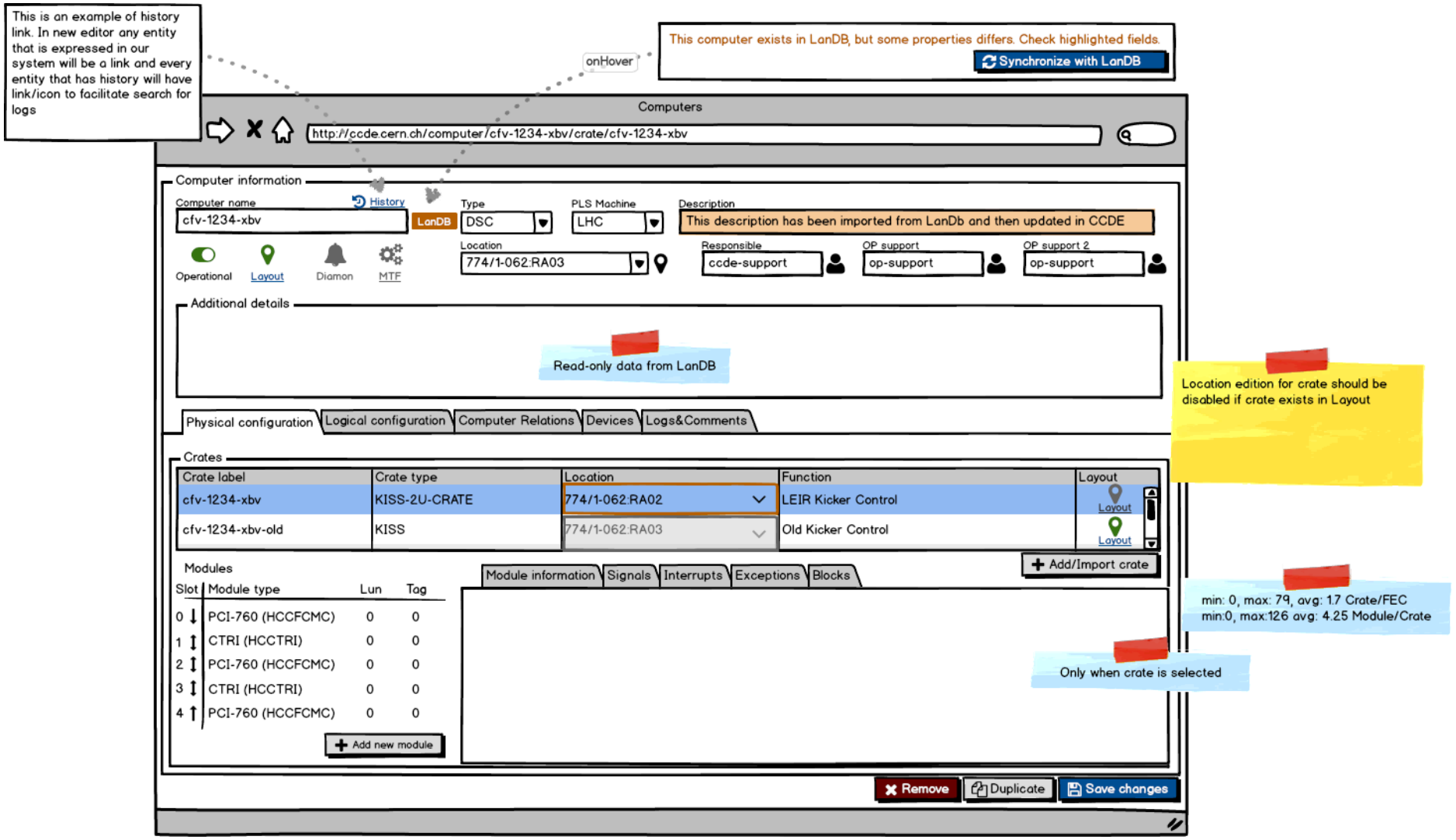
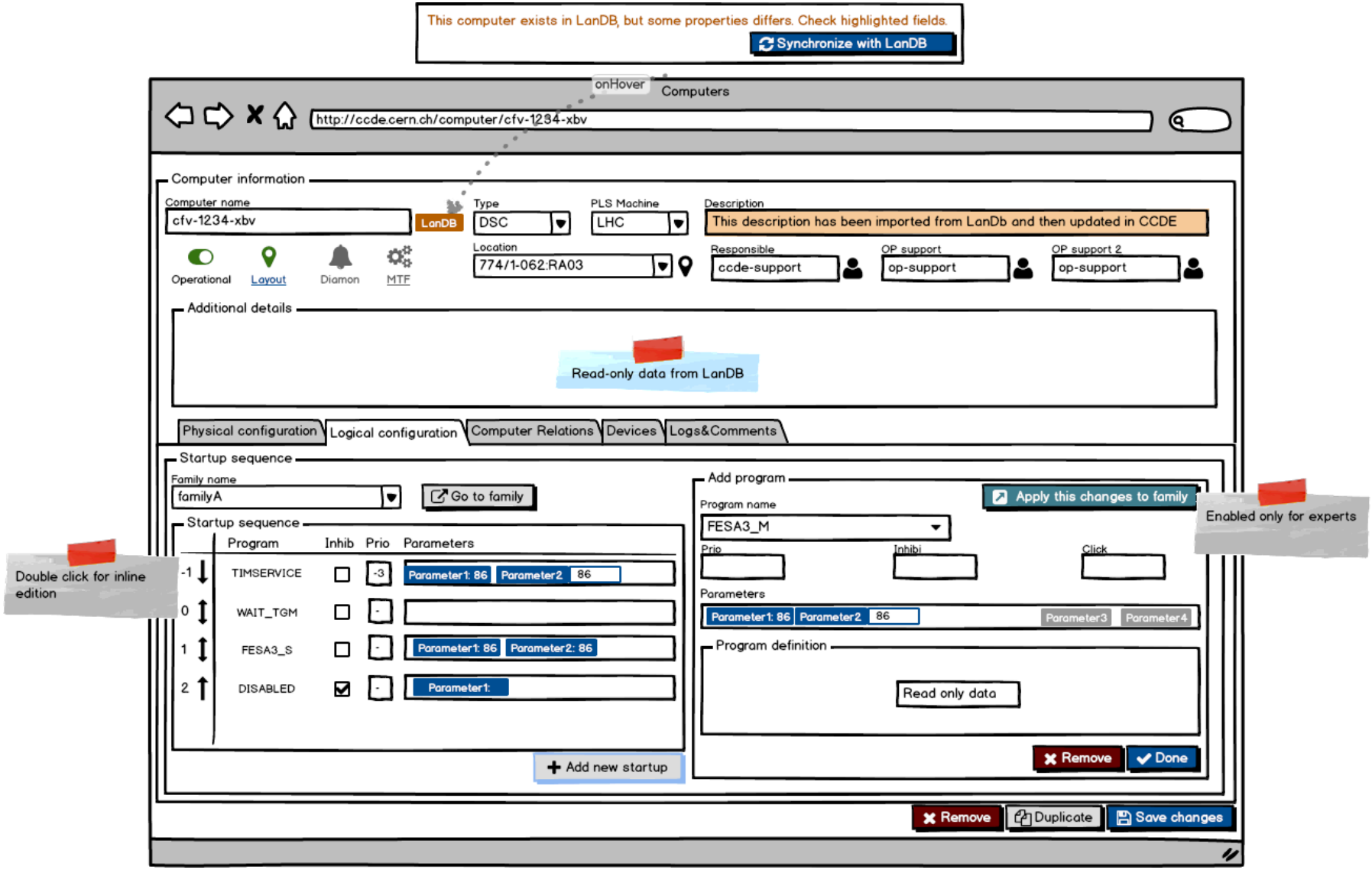
Browser of history data (data changes) presented as a stand-alone application and currently being integrated into CCDE as a module. In future recent changes and history of changes of an "entity" will be presented here.

CCDE Hardware data management



Mockup of the "CCDE Hardware" application module providing management of Crates, Modules, equipment configuration types definitions and more.

CCDE FEC Startup management



Mockup of the "CCDE FEC Startup" module providing management of FEC startup sequences (DSC programs), their parameters and access to computer families. Also highlights of data synced with NetOPs (LanDB).

CCDE development roadmap

By end of this year the CCDE will be deployed in a High-Availability scenario with White Rabbit switches management module, Data Reporting and History Browser, Admin panel and base user home page.

The majority of CCDE components should be ready by mid-2018 following the time-line:

- End of 2017 Q2 – CCDE Hardware management module (Crates, Modules, FEC startup management)
- End of 2017 - FESA Instantiation Units management
- End of 2018 Q2 – RBAC and Devices management

In mean time…

- Integration of a new module to configure NXCALS data logging
- And all the smaller modules: CMW, FGCs, Timing, Laser, etc.
- Configuration of other domains of the Controls system could be integrated as necessary