



Software proposal
vRegistry Admin CMS
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Executive summary

You are a website owner and the purpose of your site is not merely informational. Your company deals with specific areas that you'd like to handle via web. That presumes corresponding web solutions tailored for your needs.

Many software providers offer adaptations of known open source packages. That seems quick and cost-effective, but in the long run, it may not pay off due to hidden costs. An alternative is a customized solution that meets exactly your requirements and can be enhanced further.

The administration interfaces can be internal and/or external. You may need to handle some area via company intranet only or supply your clients with some awesome services too. You are special and deserve special solutions to solve your web presence in the best way. Custom Admin is designated to satisfy your business model, rather than an ISV's.

Objectives

Web presence has become axiomatic for any business. More and more functionality is added to the company websites via web applications. From some point, the administration user interface (Admin UI) is necessary to handle this specificity.

Typical business areas are covered with generic solutions like CRMs, ERPs, e-shops, bookkeeping etc. These are usually full-featured including Admin UI to control own activity and integration with other systems. But companies may also deal with specific areas requiring *ad hoc* admin solutions: scheduling & booking, data analyzing, IoT management and many others.

Large companies can afford investments into full proprietary solutions. SMBs would need something in between: generic administration tool adjusted for specific use for an affordable price (of course, enterprises may need special admin implementations too). vRegistry Custom Admin is designated to fill the gap. It provides an unique infrastructure for the creation of tailored administration interfaces.

Solution

There are many (free) content management systems (CMS) providing also admin area. However, the more demanding the website is, the more programming skills are required for the enhancements. The CMSs usually provide developer interface to add specific functionality. But there is a contradiction here: reconciling universality with specificity leads to complexity and vulnerability. And multi purposedness tends to be insecure.

Custom admin interfaces are special Admin CMSs and should be bespoke. This takes a longer lead-time for development and creates a permanent dependence on the development partner. But properly designed and realized Admin CMS helps to overcome excessive dependence and necessity to start from scratch.

The custom administrator interfaces are realized by vRegistry basing on two core principles:

1. providing standardized basic support extendable for specific features
2. following certain design and coding techniques to simplify further development

This saves resources and gives more freedom for further developments.

Features

Back-end supports both front- and back-office activities with related background operations. Front-end is supplied with the modern Admin UI (see below).

There are common features necessary for a typical administration tool:

- user management (handling names, passwords, permissions);
- staff management (handling personnel data);
- permanent data maintenance (miscellaneous attributes, countries, currencies,...);
- clients management (handling personal data);

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- activity logging (what is done by whom and when);
- reporting (querying, viewing and outputting results);
- specifying settings and preferences (several processing modes);
- messaging (emails, SMSs)
- documenting (helps, manuals);
- multilinguality, internationalization, localization;
- convenient UI with the menu system and command set.

vRegistry supports these features plus developer tools for certain programming tasks:

- configuring system;
- accessing database;
- receiving requests and forming responses;
- securing client-server communication;
- handling the menus, tables and forms;
- validating input, reacting to UI events.

The basic features of vRegistry solution are extended by the functions for particular applications. For example, receptions application includes the schedule forming, receptions' booking and SMS-reminding. In this way, developer can avoid programming of standard activities and focus on the customer's specifics.

Requirements

vRegistry Admin CMS is built on the LAMP stack using original PHP/JS micro-framework. It does not require any web application framework with thousands of scripts and versioning problems. All the functions are embedded on the most common platform, thus resulting in a very lightweight and transportable applications.

The web server must support PHP 5.5+ and URL rewriting. MySQL, Sqlite and XML are used for the data management. The client side is a cross-browser JavaScript solution that has been tested under popular HTML5/CSS3 compatible browsers.

Deliverables

The software is organized on three levels:

- system – basic functionality (vRegistry framework) including integrated products.
- solution – standard activities for the applications (vRegistry functionality);
- application – solution extension for specific activities (like Registry).

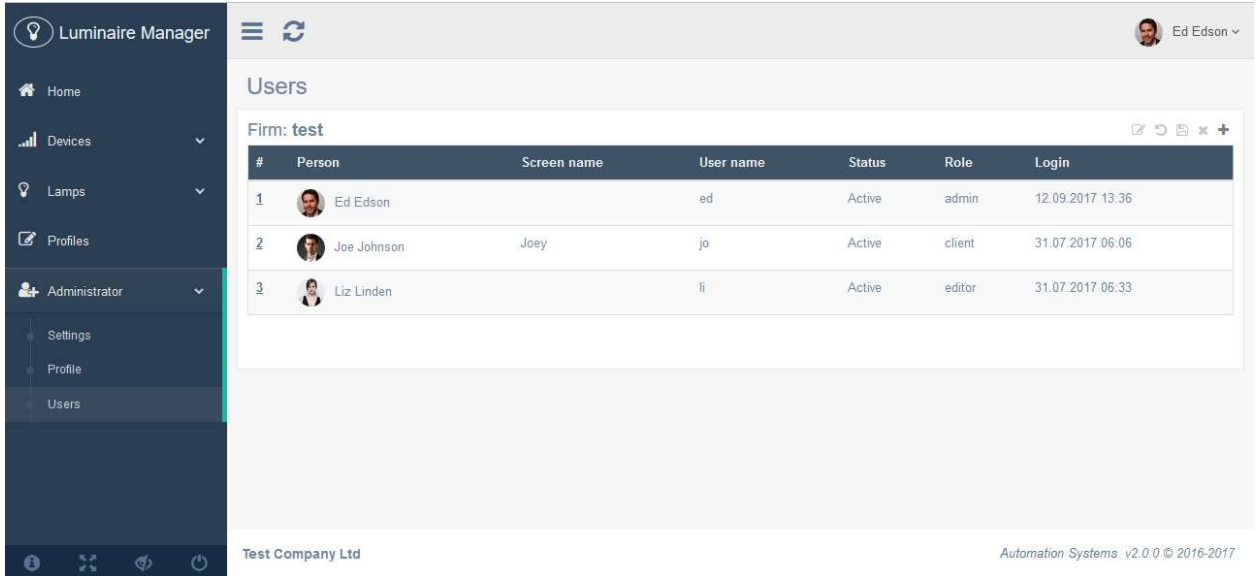
The standard solutions are included to serve the customers' applications:

- **ath** – authentication and authorization;
- **apn** – specifics of the application;
- **sln** – basic solution functionality;
- **sys** – system functionality (framework) .

The application can be installed and configured on the customer's server or hosted by a vendor. The source code is commented and product is documented.

Applications

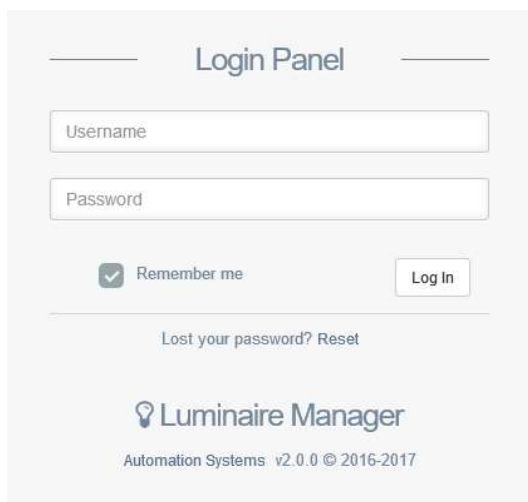
The desktop-like window opens in the client's browser after the user login. Desired action is initiated via menu system. There are three menus: main (left side), quick (bottom left) and user (upper right). Clicking main menu section displays its content in the right side area. Command menu appears in upper right to control the content. Clicking the quick or user menu section opens the modal popup. Any other menu sections are blocked until the popup is exited.



The menu sections' content is stored locally while switching between them and renewed by user reload request only. That allows to keep concurrently the current content and reduce the traffic.

Security

No one can enter the application without having credentials. The sequent requests of the authenticated user are authorized to protect against interfering from outside.



User name and password are asked and checked for validity and enablidity during the login. The server-side creates the authorisation token and the client-side sends this token in the heading of every request.

Client-side can save the login credentials in the encrypted cookie if required by user (Remember me).

The passwords are stored encrypted one-way. Password Reset panel allows to reset forgotten password via email.

The database is accessed using the prepared statements preventing the hacking. The application files are hold in the private folders accessible for the program only. The public assets and user files are readable only.

Background

The developers have been dealt with many different programming languages in different development environments. The experience includes system programming, accounting systems based on the relational database model, and E-commerce solutions (e-shopping, e-promotion, e-payment).

Currently a focus is on web application development. A micro-framework is created to develop different 3-tier applications. The back-end is realised on a LAMP platform, with the front-end in JavaScript. The AJAX/REST technique and SaaS delivery model are used for client-server communications. Strict security standards are followed.

References

Overview: <http://blog.vregistry.com/2017/10/custom-admin-cms.html>

Websait: <http://www.vregistry.com>

Contact: info@vregistry.com

Conditions

All things considered, it is only slightly more expensive to develop a custom proprietary CMS versus adapting some free one. And these expenses pay off during exploitation in every way. Customized solution reduces your TCO for Admin CMS in the long run.

Customization makes things simpler for all parties (owners, staff, users) because fits your business needs. The process requires more your time to participate in decisions, but as a bonus, it gives a better view to existing business model and possible bottlenecks.

Pricing

Customer specifications can vary to a large extent. The price depends on development volume and complexity. The range for the entire process is usually from \$7,500-to-\$10,000 and up. On the lower end the cost is from \$3,500.

In the terms of projects we usually compile the price offer and the work will be done according to the fixed project price. There is also available an hour-based consultancy. The hourly rate is about \$35...\$45. Hosting, deployment and support are subject to be agreed.

Process

This document is a general proposal for Admin CMS. After receiving your RFP we'll have initial meeting to specify your needs. Then, you'll get a written proposal which will be closed with additional specs. In case of mutual interest and understanding we'll conclude the project agreement.

The development goes through following steps: gathering information, planning/wire-framing, design/mock-ups, content writing, coding, testing/launch. This is not a linear process, so we may go back and forward as our visions become clearer.

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The launch will take place after thorough testing and your acceptance of the demo. The development version will be installed to the production environment with your real data. Maybe we'll have a beta stage for a while. The system is supported further according to our agreement.