Welcome

PLCnext Community

y ejemplos de aplicaciones con PLCnext Technology

Antonio Gordillo IMA Septiembre - Diciembre 2020

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Webinars

Agenda

- Panorama General PLCnext Technology
- Sitio PLCnext Community
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- Plataforma Youtube
- Ejemplos de aplicaciones

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enhance your automation thinking

What Is PLCnext Technology?

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Our Answer: An Open Ecosystem for Limitless Automation

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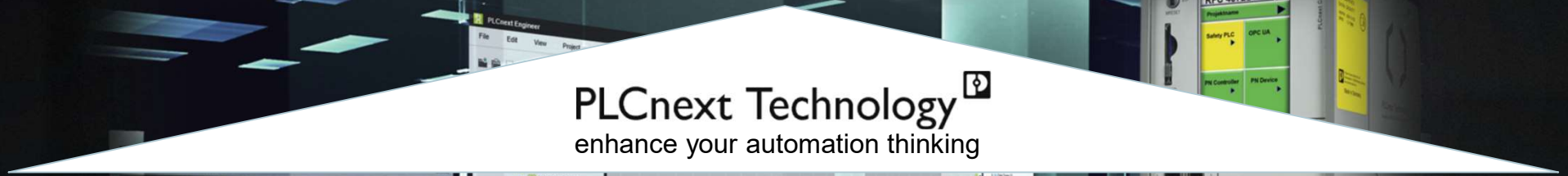
Our Answer: An Open Ecosystem for Limitless Automation



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PLCnext Technology in a nutshell

Open Control Platform

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Open Control Platform

PLCs in various performance classes including
PLCnext Runtime System and accessories for PLCnext Technology

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PLCnext Technology in a nutshell

Engineering Software

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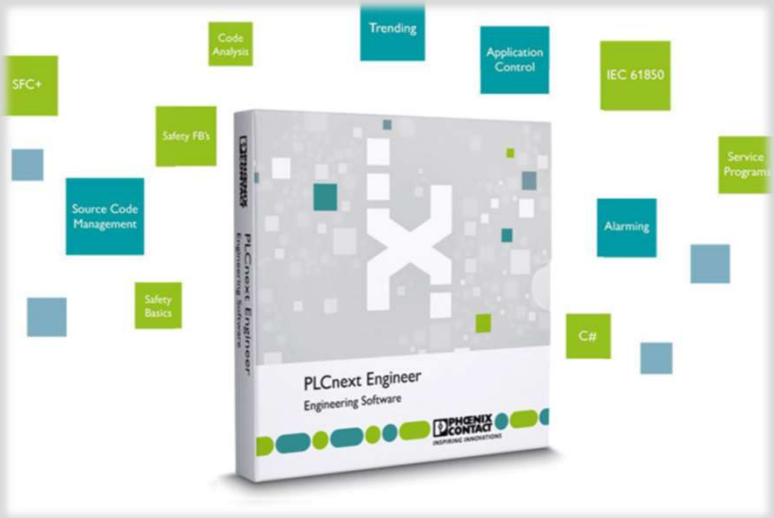

Engineering Software

Engineering tool for commissioning, configuring, and programming PLCnext Controls

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Software Store & Digital Marketplace for Automation

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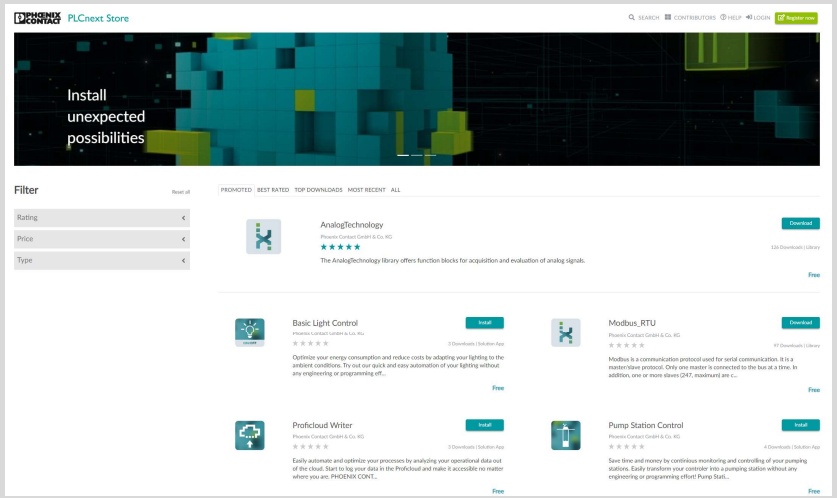

Software Store for Automation

Apps for functional extension of
PLCnext Control and PLCnext Engineer

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Cnext Store

PLCnext Community

User Collaboration & Resources

Information, support, and helpful resources about PLCnext Technology including FAQs, forums, tutorials and a GitHub presence

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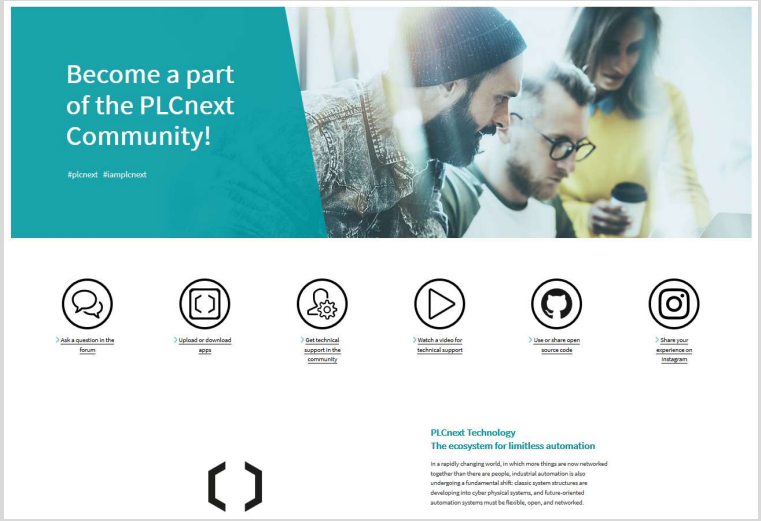

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PLCnext Technology in a nutshell

The Open Ecosystem for Limitless Automation

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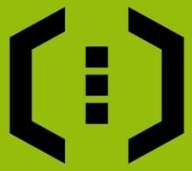

Open Control Platform

PLCs in various performance classes including PLCnext Runtime System and accessories for PLCnext Technology

PLCnext Engineer

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Software Store for Automation

Apps for functional extension of PLCnext Control and PLCnext Engineer

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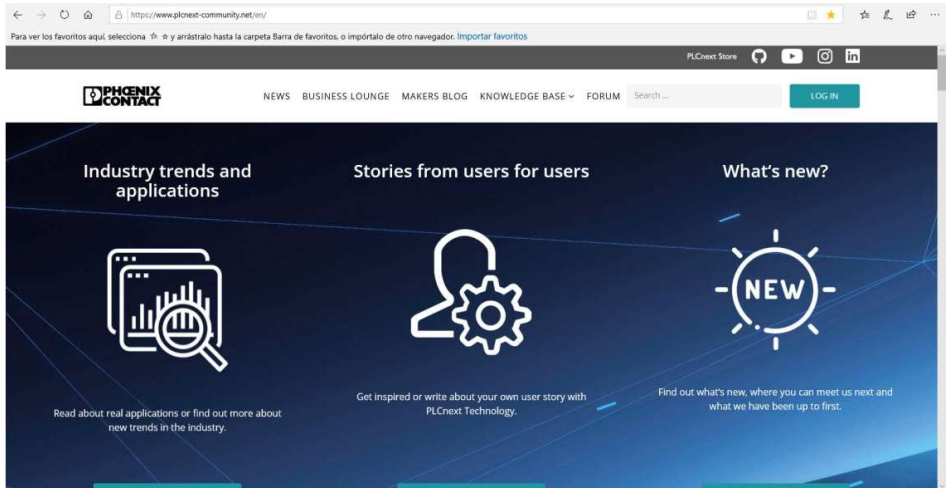

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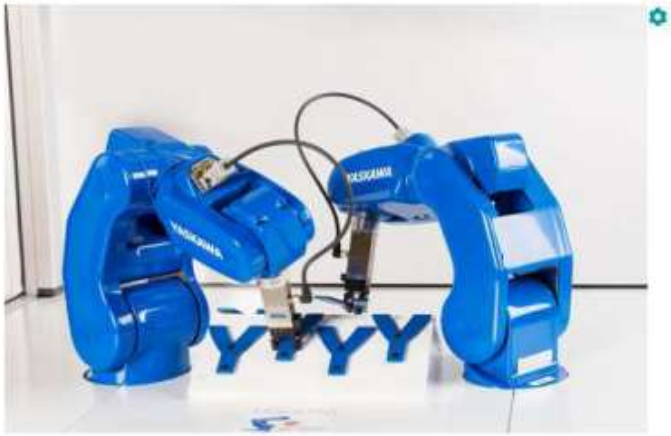
News

News

NEWS ON PLCNEXT TECHNOLOGY 16 SEPTEMBER 2020 HITS: 179

Yaskawa and Phoenix Contact agree on a partnership for the PLCnext Technology open automation platform



The shared goal of Yaskawa, an industrial robotics and mechatronics manufacturer, and Phoenix Contact, a manufacturer of automation solutions, is to drive forward the transition away from proprietary solutions towards an open and future-proof ecosystem for industrial automation. Yaskawa, a leading company in this industry, has decided to use PLCnext Technology. As a part of this framework, Phoenix Contact will license its PLCnext runtime environment to Yaskawa and has agreed upon joint further development. Yaskawa plans to use the PLCnext runtime system in the fields of Motion Controls and Robotics, initially in Europe and the USA.

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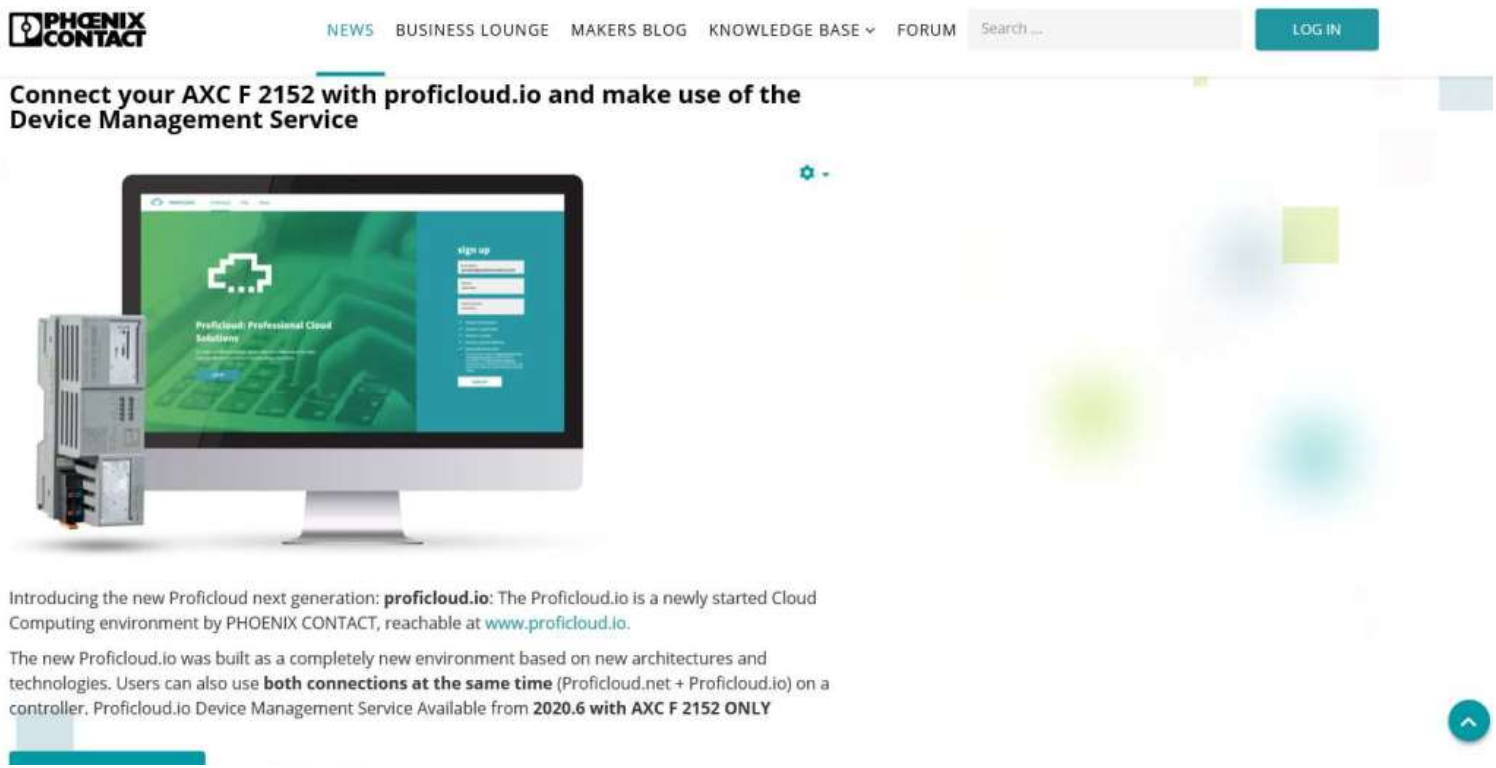
News



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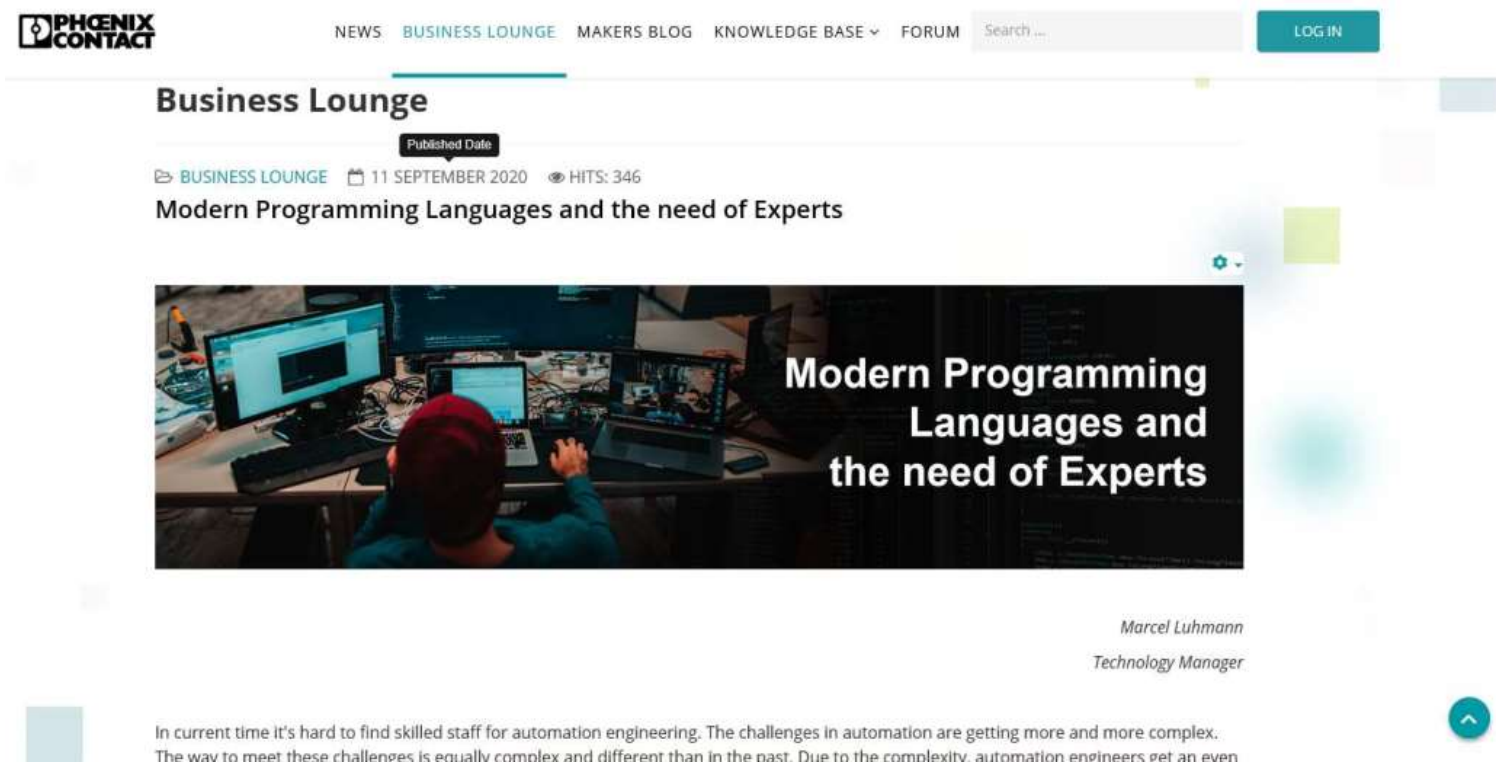
Business Lounge



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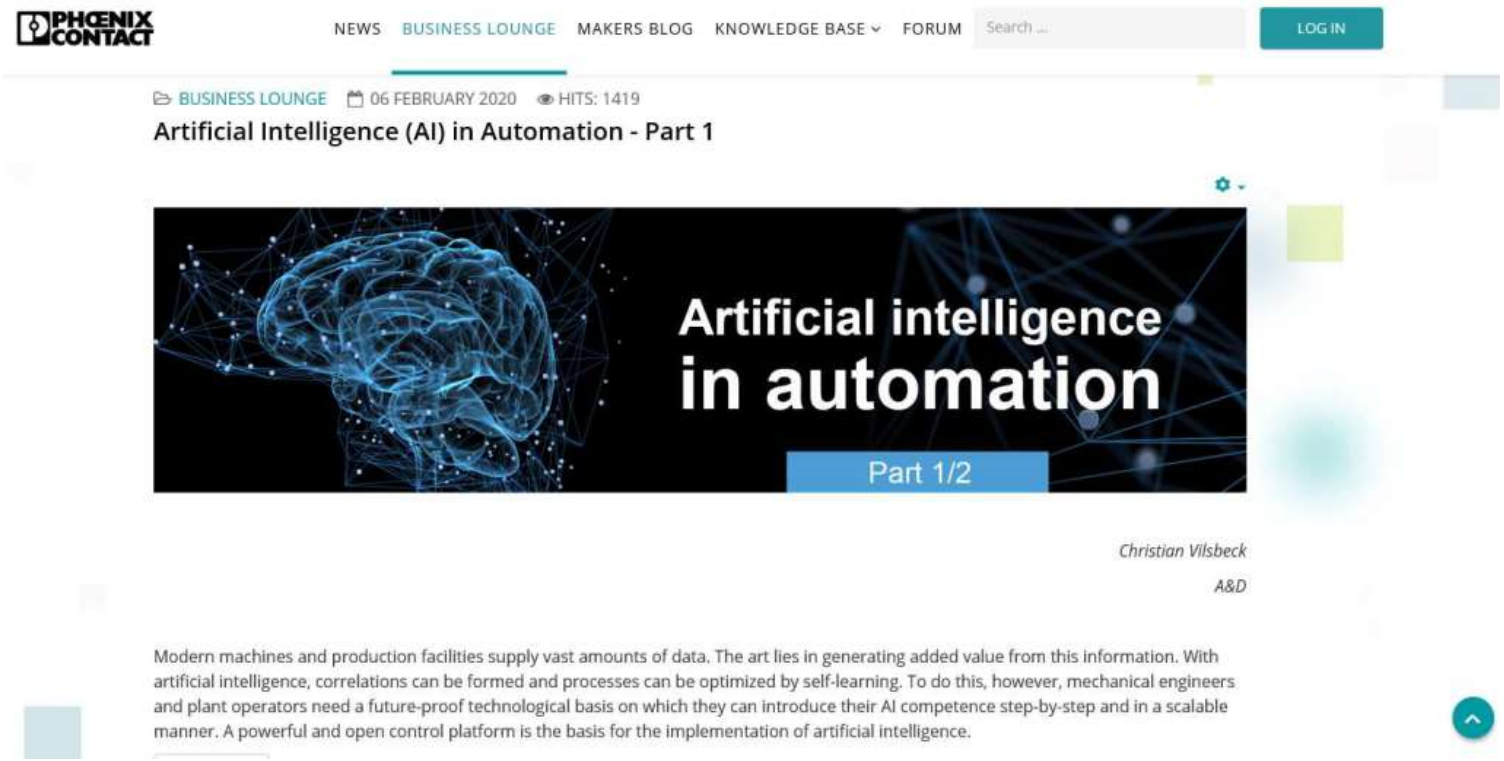

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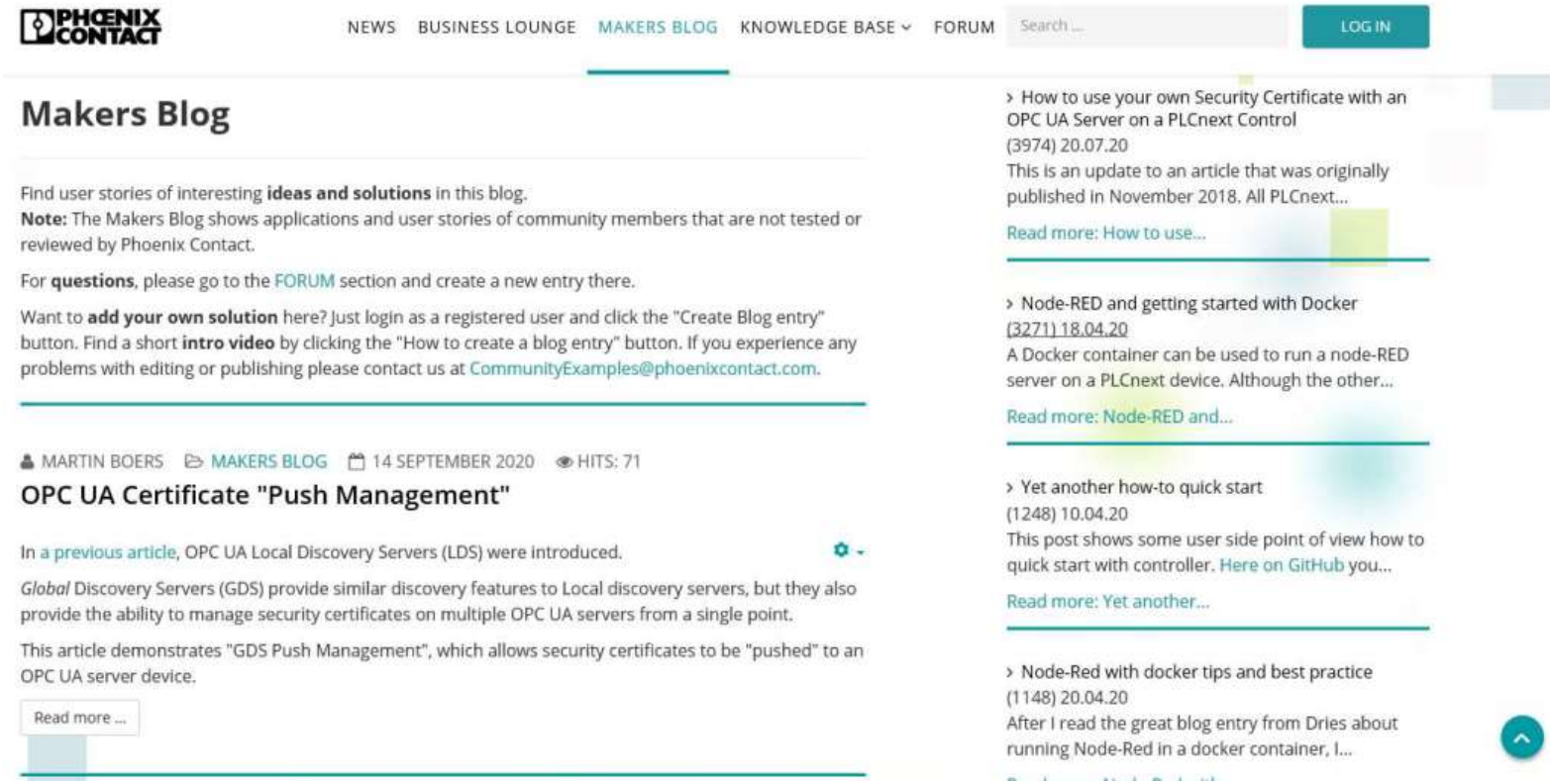

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Makers Blog

DRIES VAN LAERHOVEN MAKERS BLOG 18 APRIL 2020 HITS: 3272

Node-RED and getting started with Docker

A Docker container can be used to run a node-RED server on a PLCnext device. Although the other method described here is a little faster. The use of OCI containers comes with some advantages. For example when repeatedly using the same packages for an application it can be useful to build a standard image and just download it from Docker hub. Docker can also be used to start and stop the node-red server when we want to.

This blog will explain just that. First I'll guide you trough the installation process of Docker and we'll check the installation. We'll build a custom image with packages of to our liking pre-installed with a Dockerfile and create a container from our freshly created image. Finally we'll make sure our container will start on boot of the controller and push our image to Dockerhub.

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Installation of the Balena - engine

I lied a bit when I said Docker containers can be used to run a node-RED runtime on a PLCnext device. As you'll see we use the Balena-engine as an engine to run containers, more specifically we'll use OCI (Open Container Initiative) containers. Wrestling trough the nomenclature would bring us way to far for a Makersblog, but in the further reading section at the end of this blog I've added some links for those who are interested.

The installation procedure is rather easy and can be found here for full reference, but for practicality reasons the commands are also given in the next section.
Make sure you're logged in as a root user, to create a new root password type the following command in the shell and type your admin password followed by two times the new root pass.

```
sudo passwd root
```

Login as root user by typing su followed by your newly created password.

Clone the git repository and go to the new folder

```
git clone https://github.com/PLCnext/Docker_GettingStarted.git
cd Docker_GettingStarted
```

Make the setup script executable and execute said script.

```
chmod +x setup.sh
./setup.sh
```

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- Getting Started
- PLCnext Info Center
- PLCnext Store Info Center
- Tutorials
- Manuals
- E-Learning
- FAQ
- Features and Roadmap

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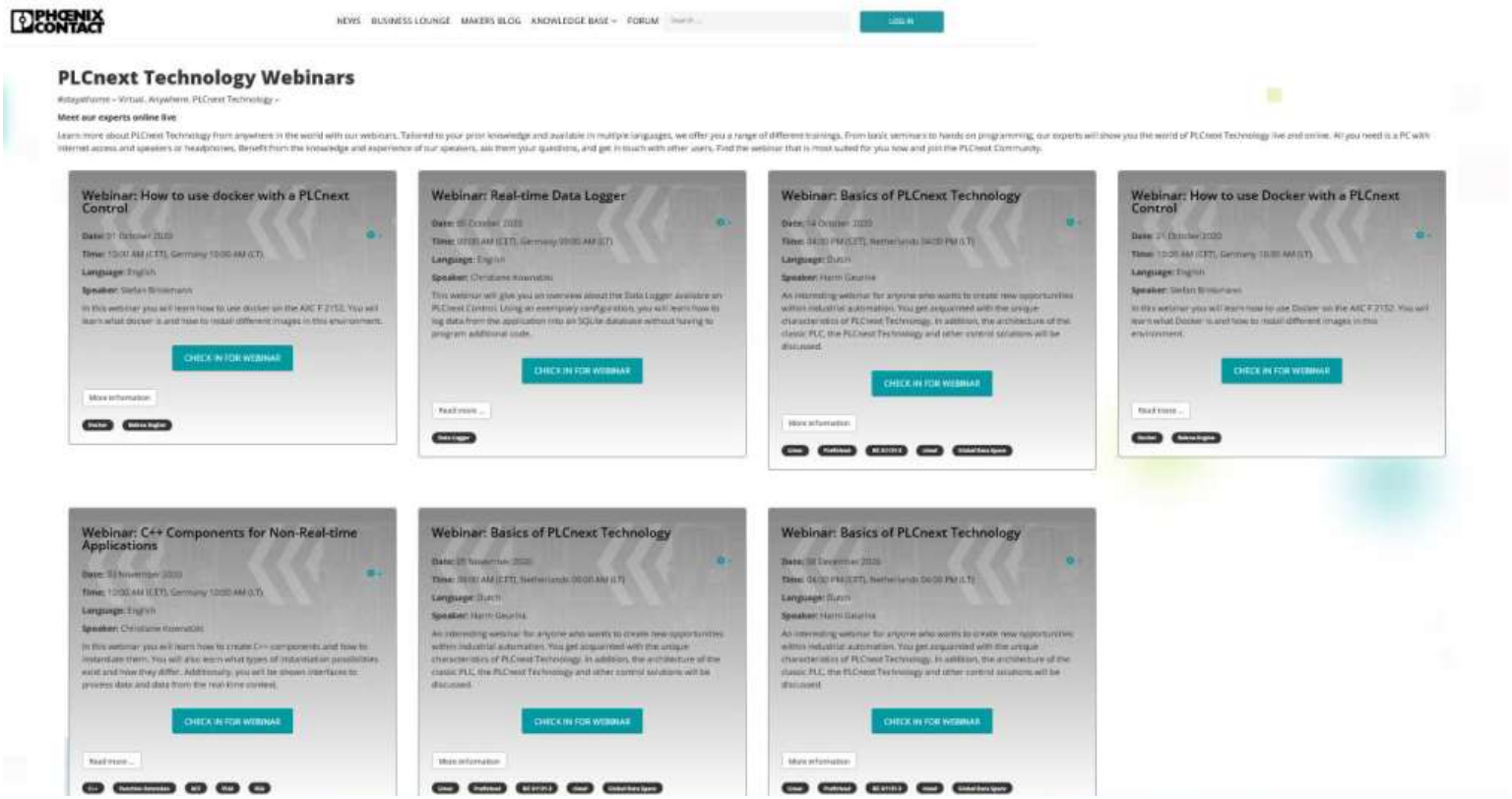

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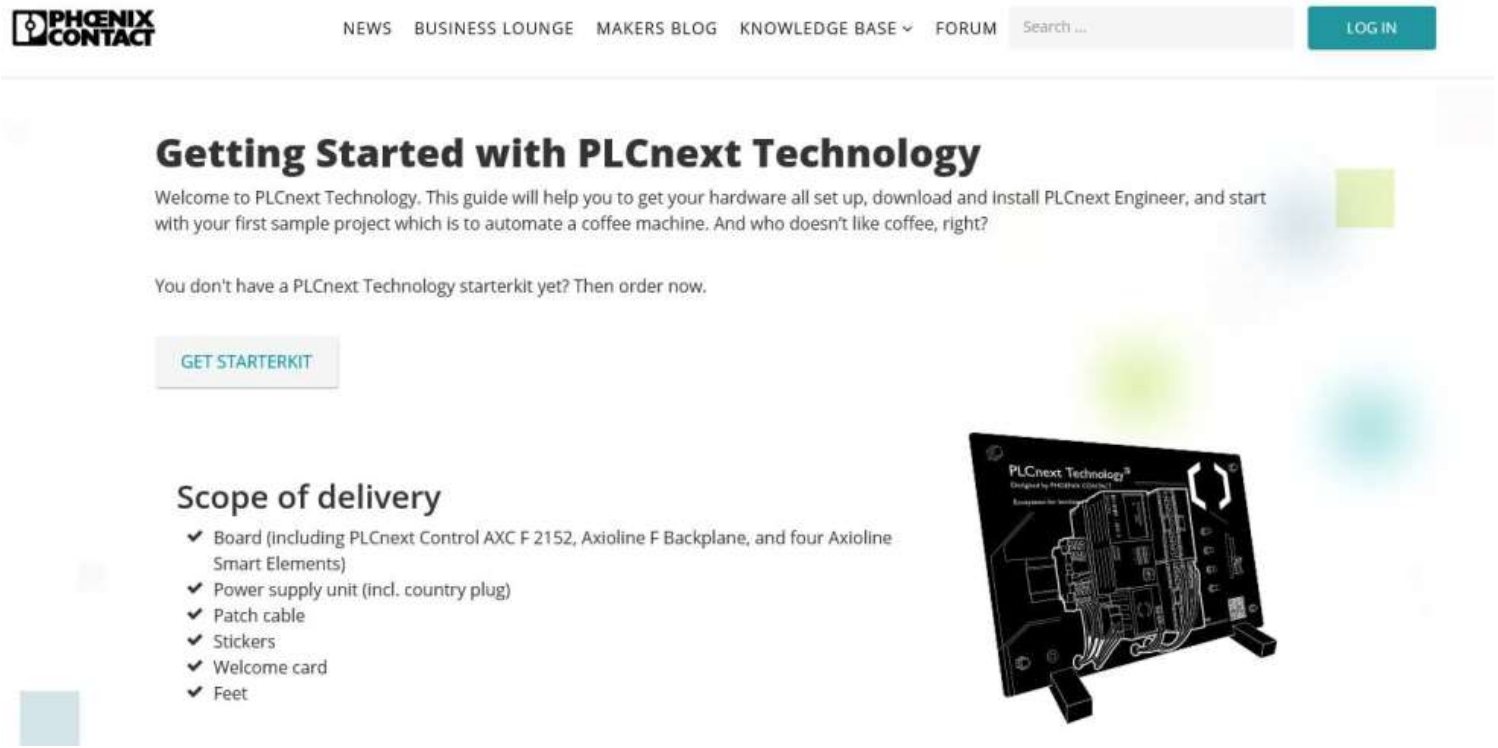
Getting Started



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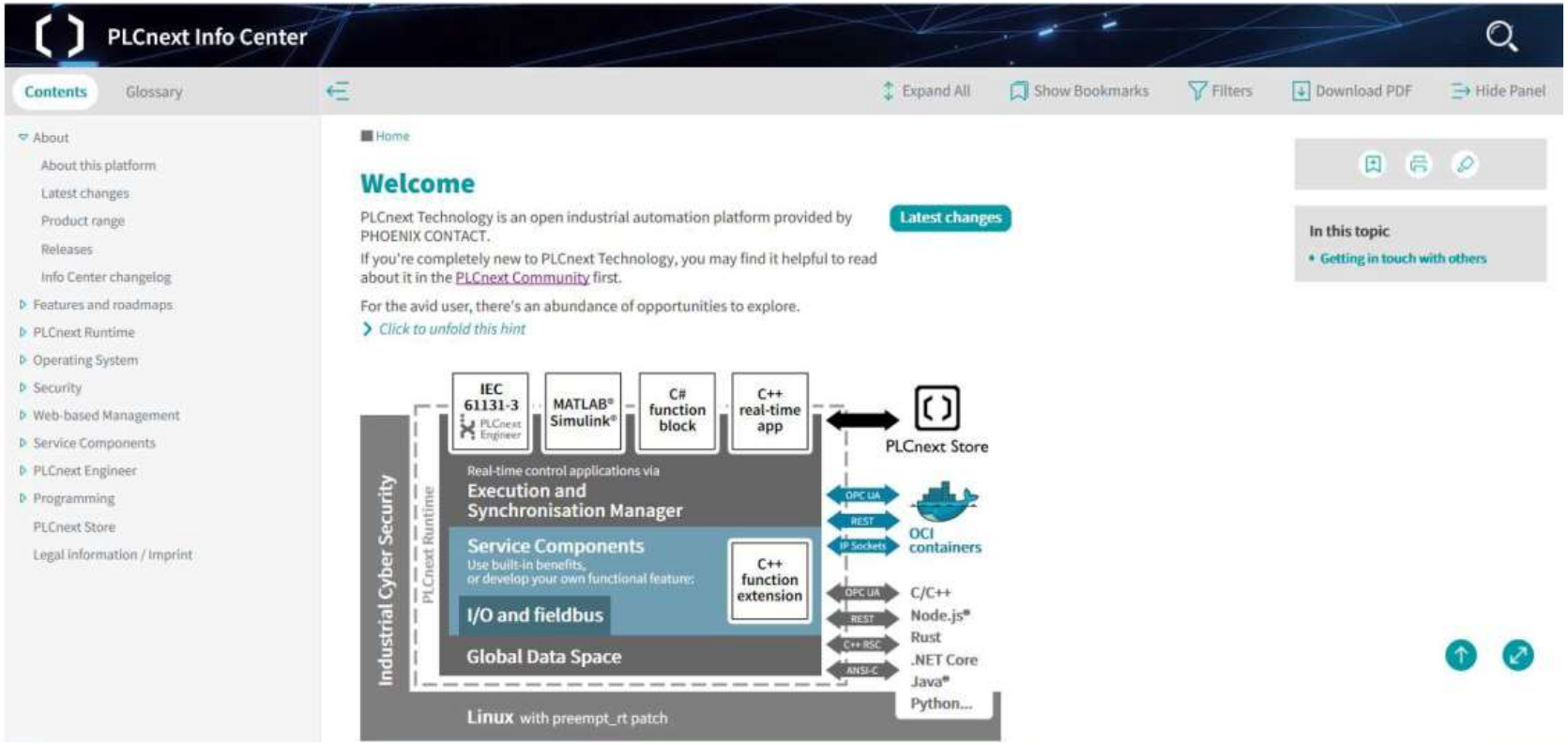

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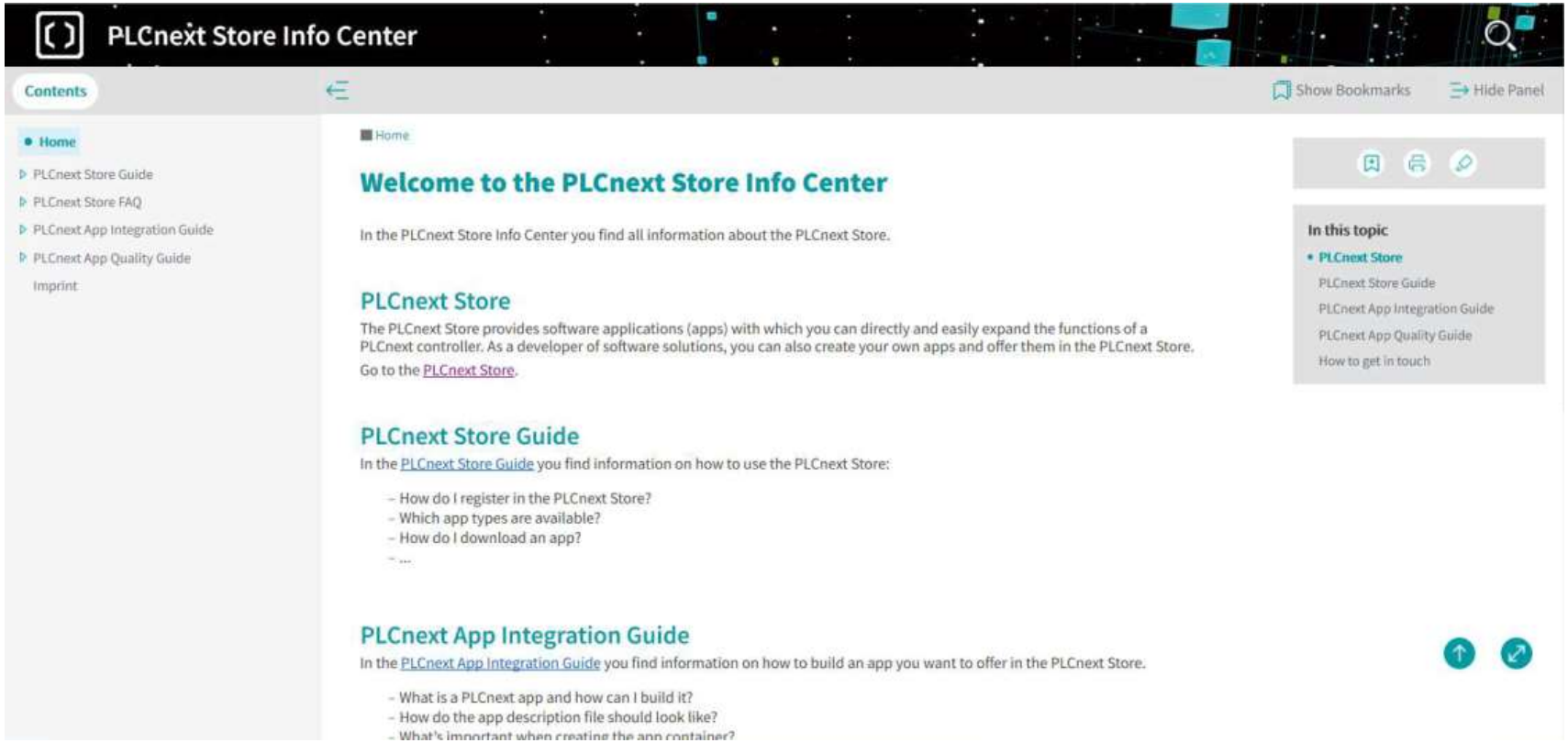

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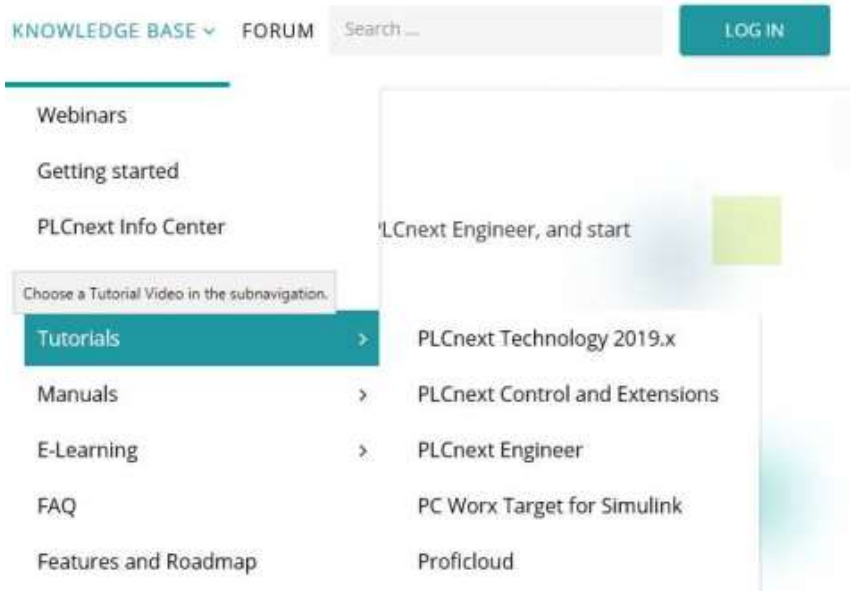
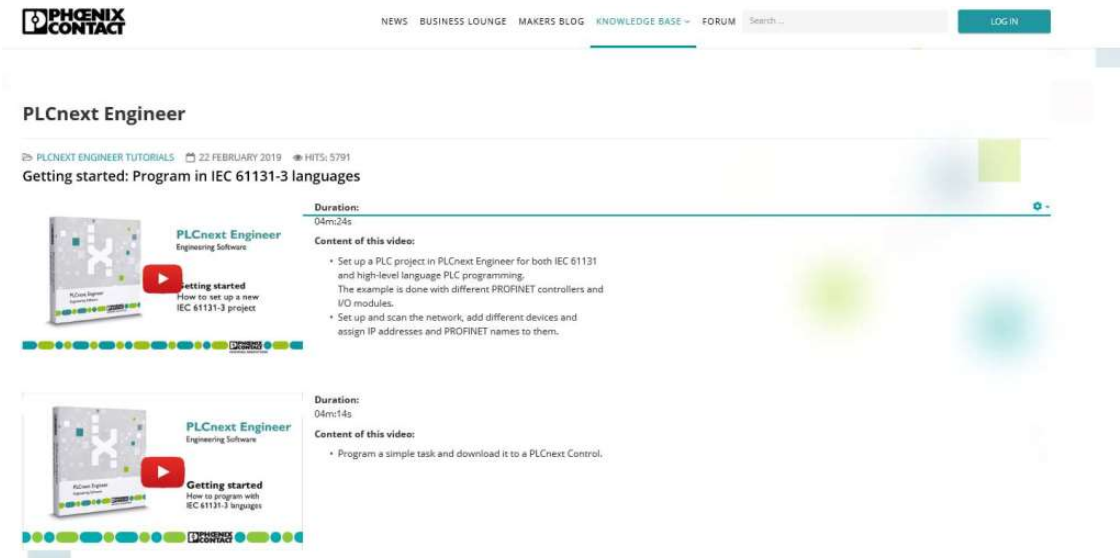
Tutorials





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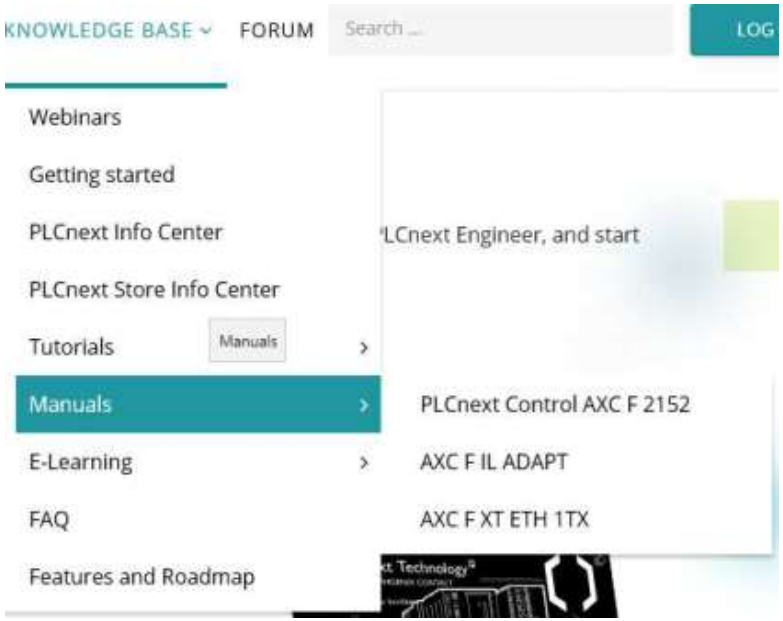

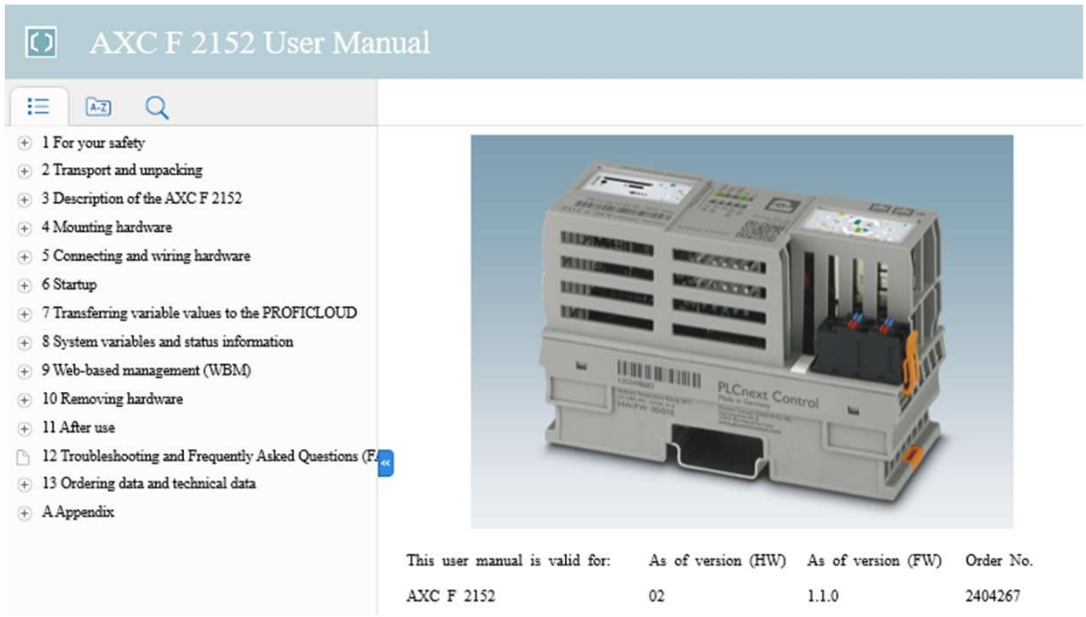

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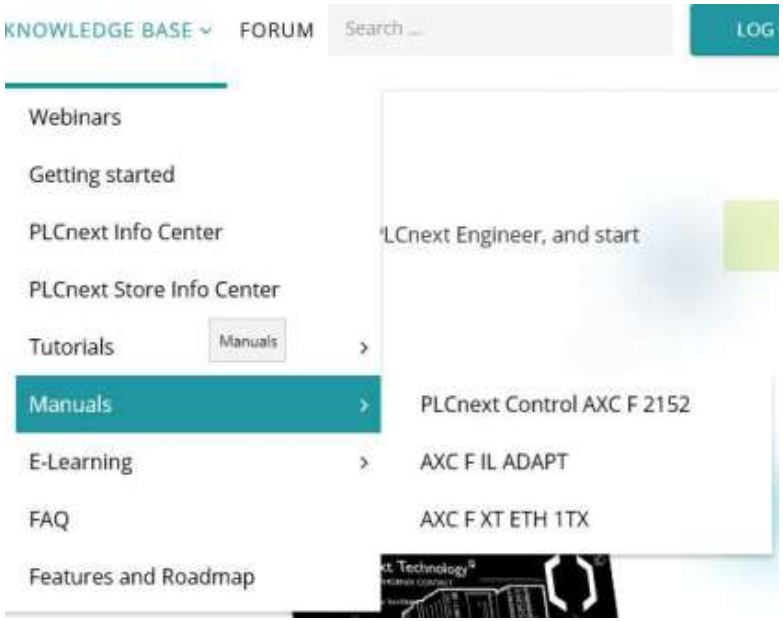

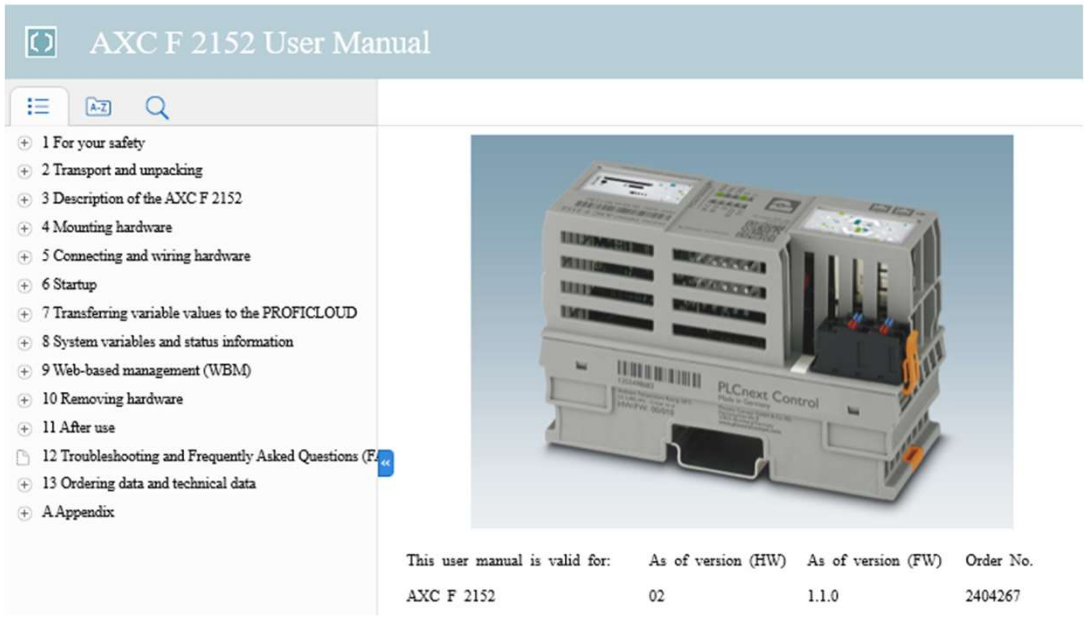

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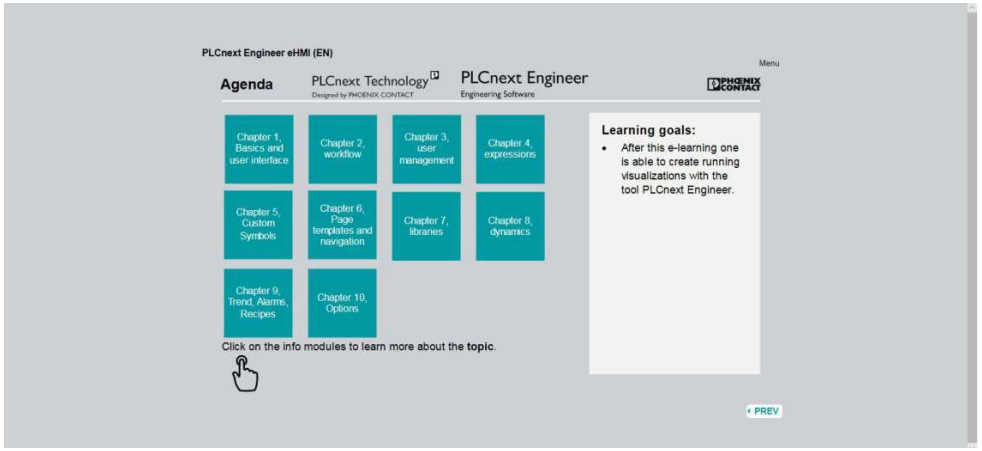
E-Learning



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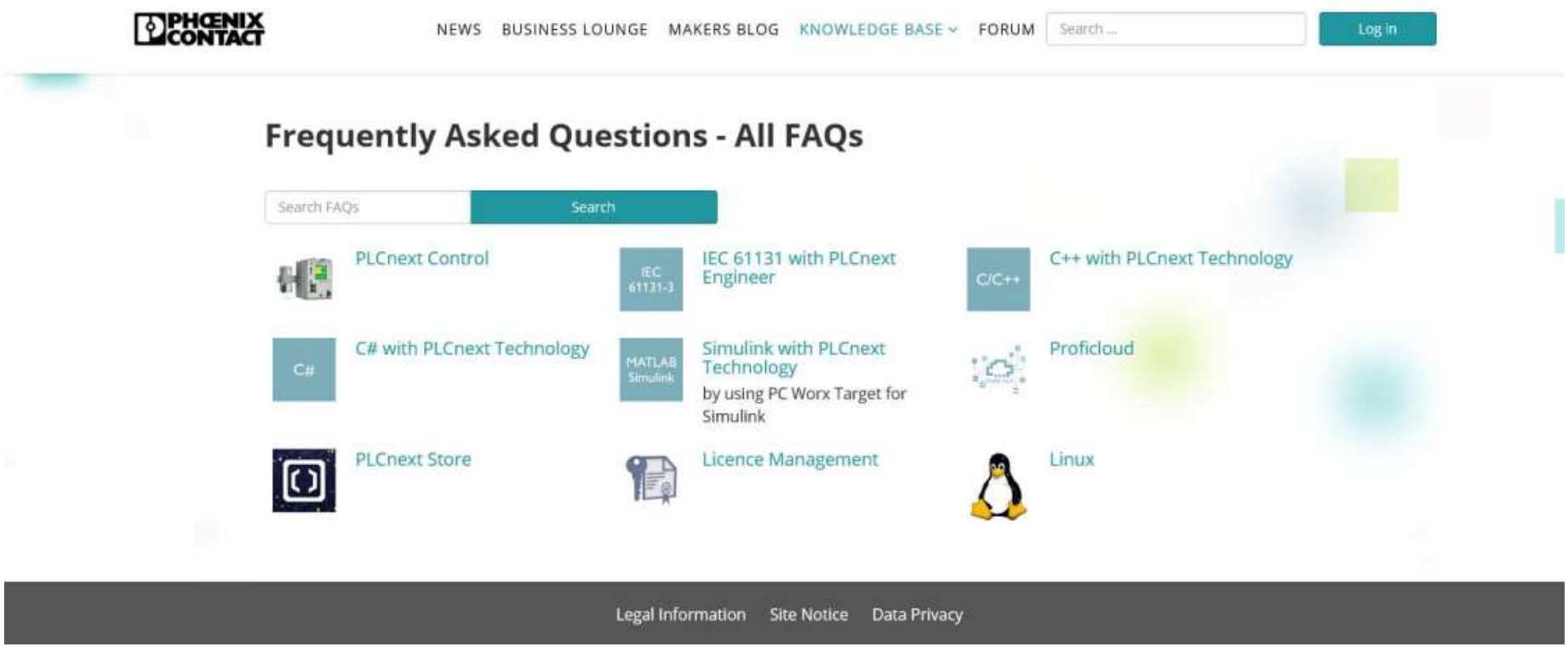

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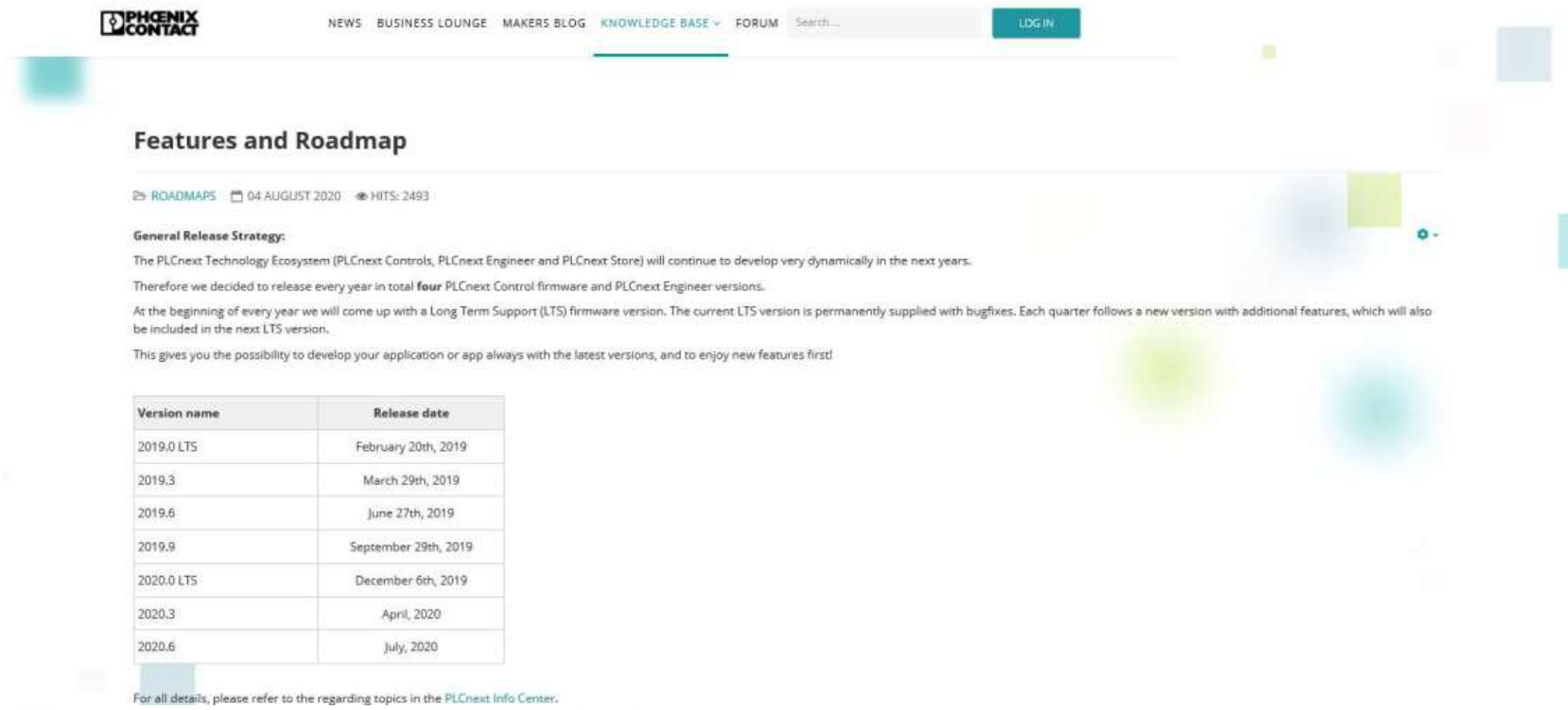
Road Map



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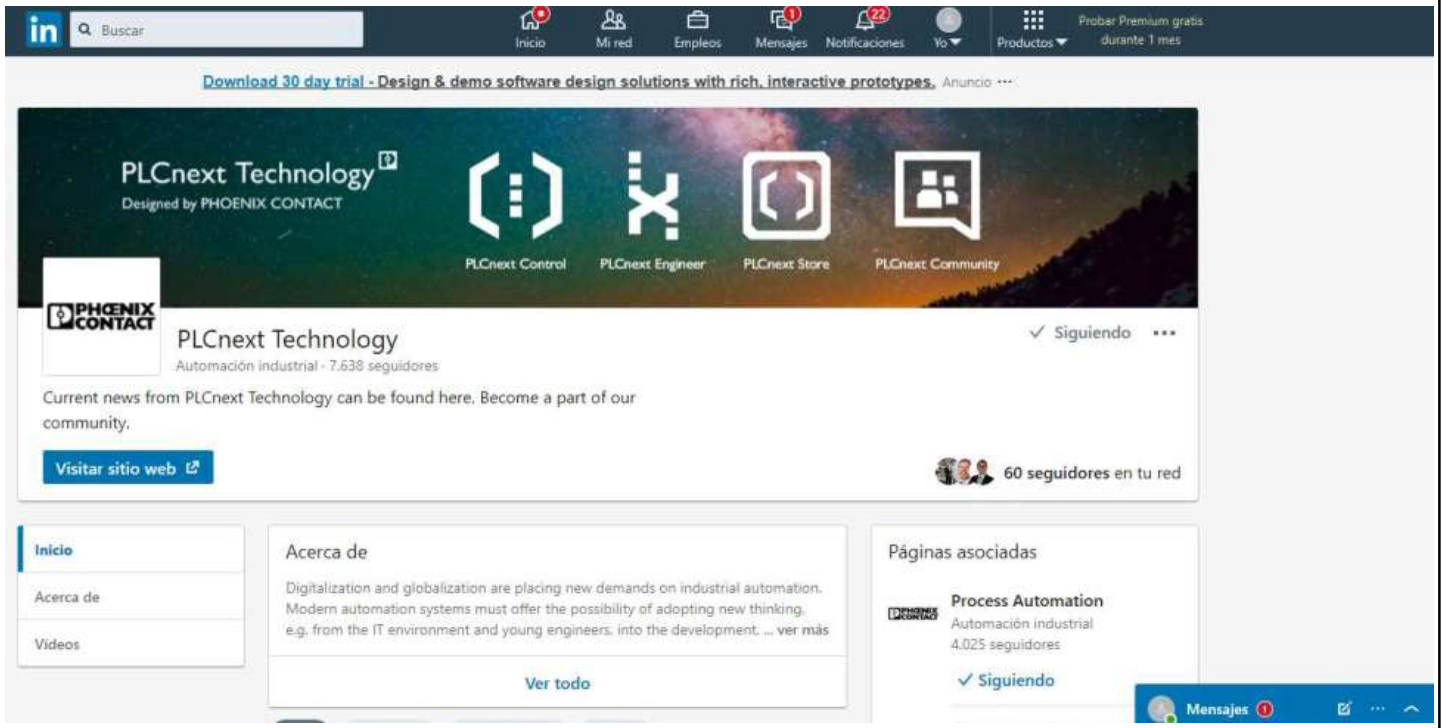

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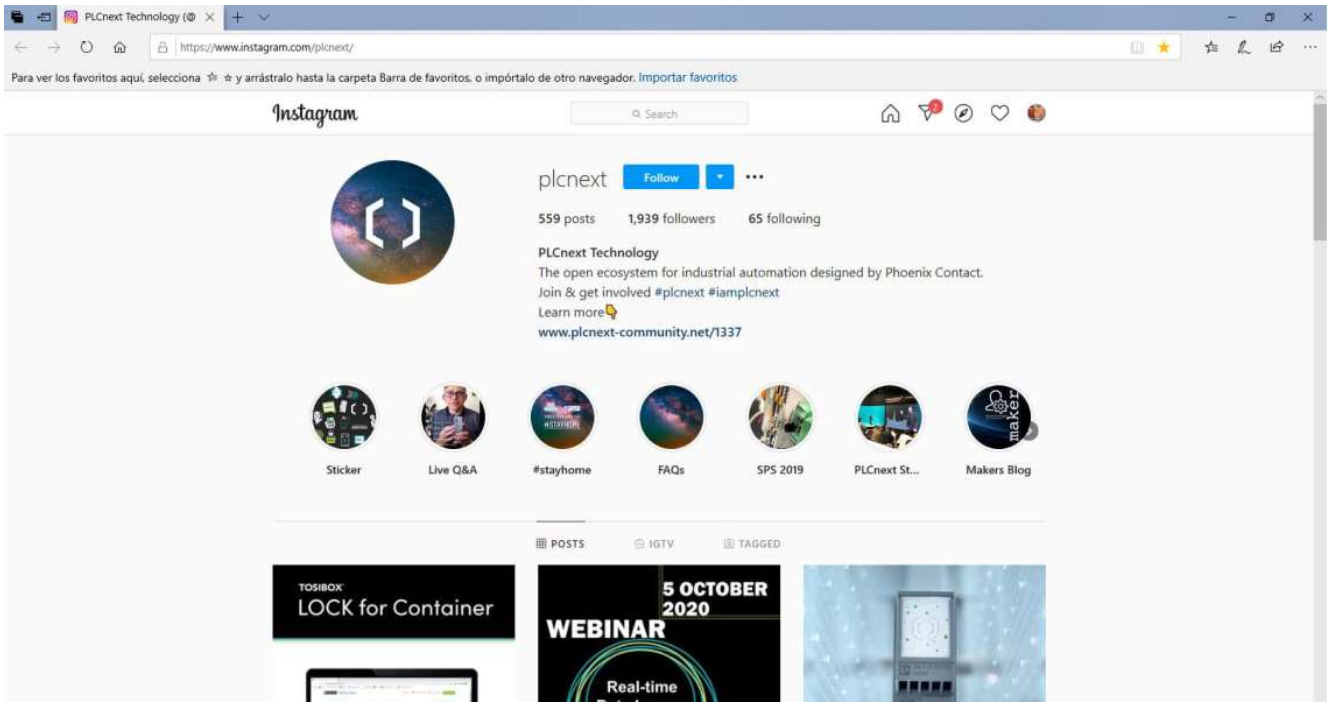

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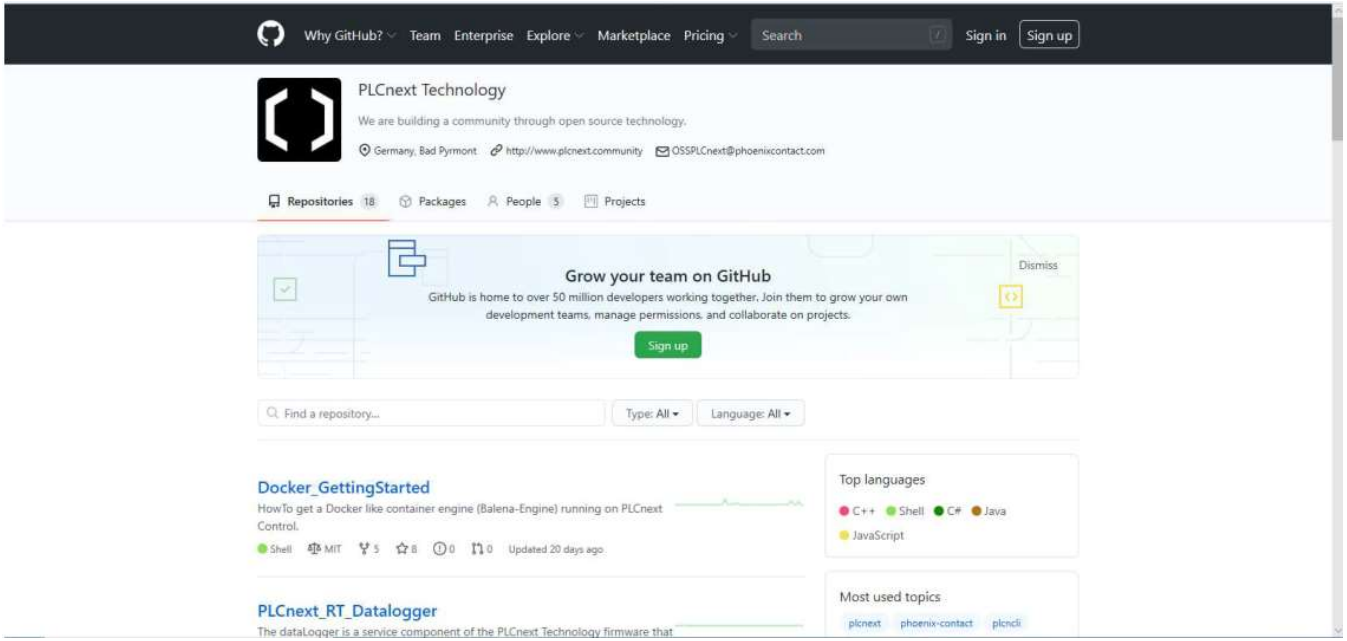

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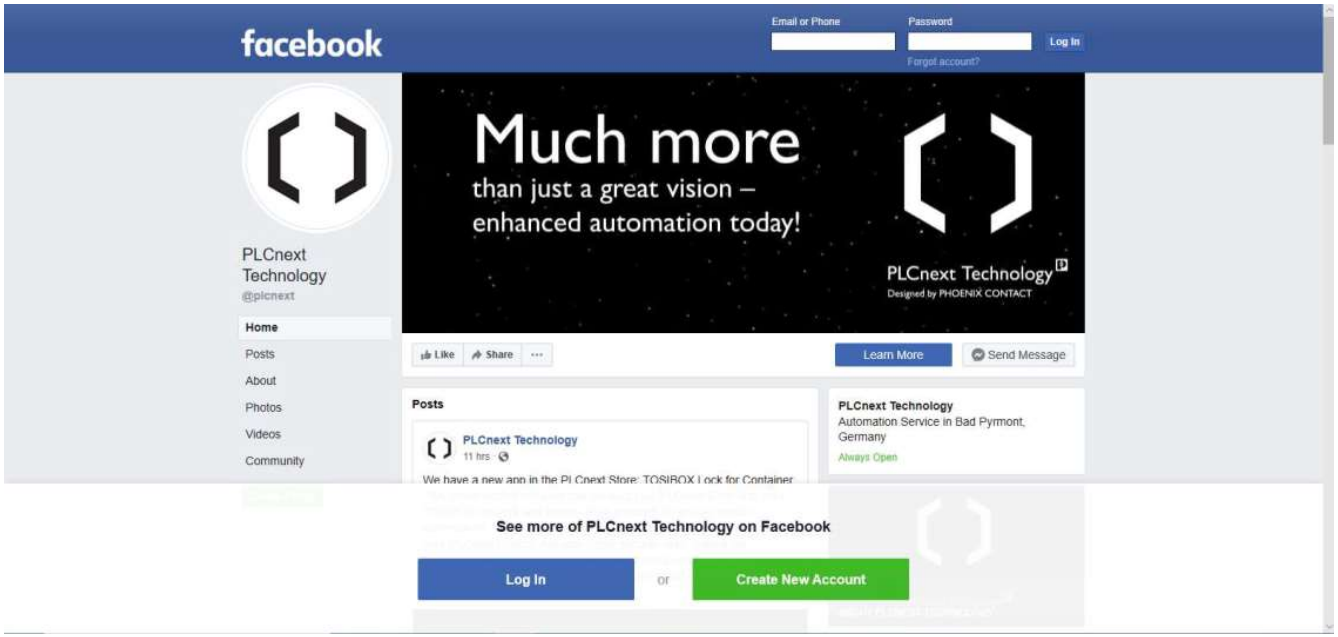

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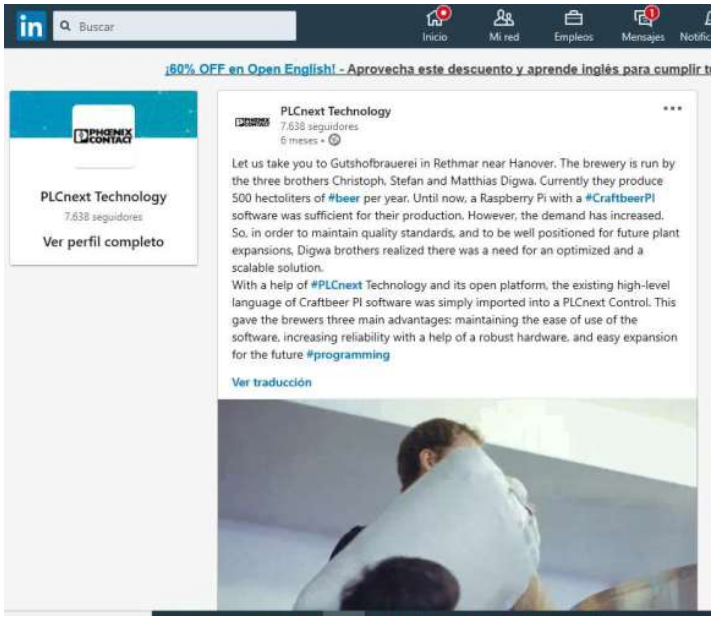

Permítanos llevarlo a Gutshofbrauerei en Rethmar, cerca de Hannover. La cervecería está dirigida por los tres hermanos Christoph, Stefan y Matthias Digwa. Actualmente producen 500 hectolitros de #beer al año. Hasta ahora, una Raspberry Pi con un #CraftbeerPI software era suficiente para su producción. Sin embargo, la demanda ha aumentado. Por lo tanto, con el fin de mantener los estándares de calidad, y para estar bien posicionados para futuras expansiones de plantas, los hermanos Digwa se dieron cuenta de que había una necesidad de una solución optimizada y escalable.
Con la ayuda de #PLCnext La tecnología y su plataforma abierta, el lenguaje de alto nivel existente del software Fabricbeer PI simplemente se importó en un PLCnext Control. Esto dio a los cerveceros tres ventajas principales: mantener la facilidad de uso del software, aumentar la fiabilidad con la ayuda de un hardware robusto y facilitar la expansión para el futuro #programming

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Aplicaciones

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4 meses •

We want to show you how PLCnext Technology can integrate future technologies into existing systems. Let's go to our example in Huntorf in Germany. This power plant is all about storing energy. Surplus electricity is stored here, which can then be fed back into the power grid when it's needed. PLCnext Technology was the vital element in upgrading this plant because the existing power plant controller was not up to the new challenges. So we developed a solution in close cooperation with the customer. The key here was that the PLCnext Control could be seamlessly installed and was compatible with the existing technology. The new controller reads operating data from the existing controller and transmits it to a local visualization system. To achieve this, we used the OPC UA communication standard. The data is also transmitted to the control center at the power plant in Wilhelmshaven. Additionally, the openness to new technologies was a key argument for choosing PLCnext Technology - for example, integrating Blockchain. Blockchain is a digital platform that securely saves data and transactions using peer-to-peer networks. And in contrast to the old controller, the PLCnext Control can transfer values to a blockchain #plcnext #iamplcnext #blockchain #programming #powerplant

Queremos mostrarle cómo PLCnext Technology puede integrar tecnologías futuras en sistemas existentes. Vayamos a nuestro ejemplo en Huntorf en Alemania. Esta planta de energía se trata de almacenar energía. El excedente de electricidad se almacena aquí, que luego se puede volver a introducir en la red eléctrica cuando sea necesario. PLCnext Technology fue el elemento vital en la actualización de esta planta porque el controlador de la planta de energía existente no estaba a la altura de los nuevos desafíos. Así que desarrollamos una solución en estrecha cooperación con el cliente. La clave aquí era que el PLCnext Control se podía instalar sin problemas y era compatible con la tecnología existente. El nuevo controlador lee los datos operativos del controlador existente y los transmite a un sistema de visualización local. Para lograrlo, utilizamos el estándar de comunicación OPC UA. Los datos también se transmiten al centro de control de la central eléctrica de Wilhelmshaven. Además, la apertura a las nuevas tecnologías fue un argumento clave para elegir la tecnología PLCnext, por ejemplo, la integración de Blockchain. Blockchain es una plataforma digital que guarda de forma segura datos y transacciones mediante redes punto a punto. Y a diferencia del controlador anterior, el control PLCnext puede transferir valores a una cadena de bloques **#plcnext #iamplcnext #blockchain #programming #powerplant**

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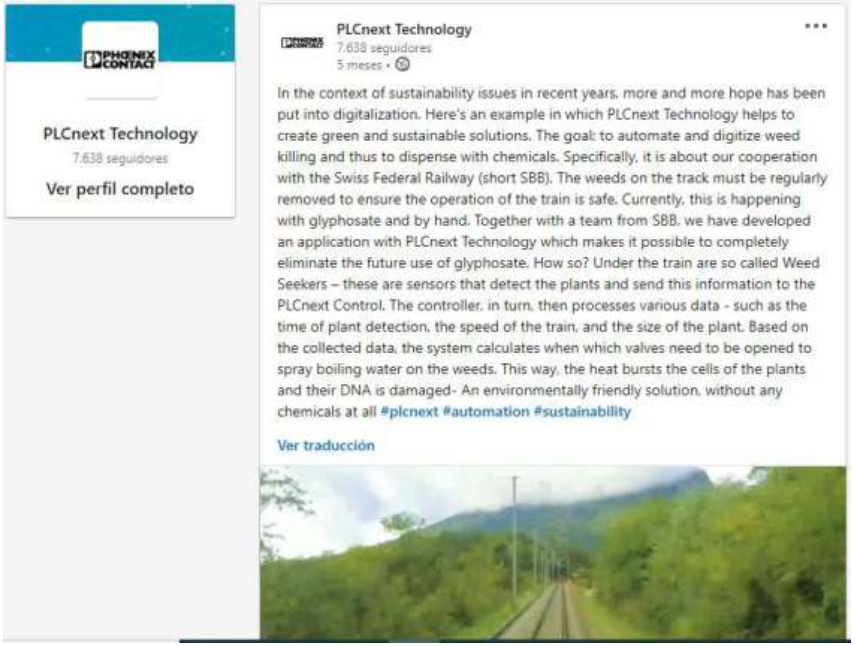

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5 meses •

In the context of sustainability issues in recent years, more and more hope has been put into digitalization. Here's an example in which PLCnext Technology helps to create green and sustainable solutions. The goal: to automate and digitize weed killing and thus to dispense with chemicals. Specifically, it is about our cooperation with the Swiss Federal Railway (short SBB). The weeds on the track must be regularly removed to ensure the operation of the train is safe. Currently, this is happening with glyphosate and by hand. Together with a team from SBB, we have developed an application with PLCnext Technology which makes it possible to completely eliminate the future use of glyphosate. How so? Under the train are so called Weed Seekers – these are sensors that detect the plants and send this information to the PLCnext Control. The controller, in turn, then processes various data - such as the time of plant detection, the speed of the train, and the size of the plant. Based on the collected data, the system calculates when which valves need to be opened to spray boiling water on the weeds. This way, the heat bursts the cells of the plants and their DNA is damaged- An environmentally friendly solution, without any chemicals at all #plcnext #automation #sustainability

Ver traducción

En el contexto de las cuestiones de sostenibilidad de los últimos años, se ha puesto cada vez más esperanza en la digitalización. Este es un ejemplo en el que la tecnología PLCnext ayuda a crear soluciones ecológicas y sostenibles. El objetivo: automatizar y digitalizar la matanza de la hierba y así prescindir de los productos químicos. En concreto, se trata de nuestra cooperación con el Ferrocarril Federal Suizo (corto SBB). Las weeds en la vía deben ser retiradas regularmente para asegurarse de que el funcionamiento del tren es seguro. Actualmente, esto está sucediendo con glifosato y a mano. Junto con un equipo de SBB, hemos desarrollado una aplicación con tecnología PLCnext que permite eliminar por completo el uso futuro del glifosato. ¿Cómo es eso? Bajo el tren se llaman Weed Seekers – estos son sensores que detectan las plantas y envían esta información al PLCnext Control. El controlador, a su vez, procesa varios datos, como el momento de la detección de la planta, la velocidad del tren y el tamaño de la planta. Sobre la base de los datos recogidos, el sistema calcula cuándo deben abrirse las válvulas para rociar agua hirviendo sobre las hierbas. De esta manera, el calor rompe las células de las plantas y su ADN está dañado- Una solución respetuosa con el medio ambiente, sin ningún producto químico en absoluto #plcnext #automation #sustainability

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With the hashtags #plcnext and #iamplcnext we want to make our community visible. So if you have exciting posts about PLCnext Technology, please use these hashtags.

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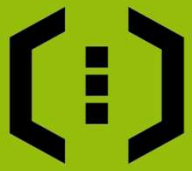
PLCnext Control	PLCnext Engineer	PLCnext Store	PLCnext Community
			
Open Control Platform PLCs in various performance classes including PLCnext Runtime System and accessories for PLCnext Technology	**Engineering Software** Engineering tool for commissioning, configuring, and programming PLCnext Controls	**Software Store for Automation** Apps for functional extension of PLCnext Control and PLCnext Engineer	**User Collaboration & Resources** Information, support, and helpful resources about PLCnext Technology including FAQs, forums, tutorials and a GitHub presence

PHOENIX CONTACT