

WHO WILL WIN THE PWA BATTLE?

IN THIS ARTICLE YOU'LL FIND OUT:

- What are the two main approaches to PWA?
- What PWA solutions are available on the market?
- What are the differences between the most popular solutions?

By Magezine Team

2019 is the year of mobile. Oh, wait – didn't we hear that last year? It was similar in 2017, wasn't it? That's right. However, now we can talk about the upcoming breakthrough in the mobile market, all due to the growing popularity of PWA applications. Will Progressive Web Apps turn out to be a revolutionary solution? We have to wait for the answer a little bit longer. But it is already known that the development of the PWA technology will certainly bridge the gap between websites and native mobile apps.

selected solutions overview

PWA has been a hell of a buzzword lately. We are almost certain that our readers know this term. If not, we recommend you to read the previous article in the Magezine, in which we introduce the topic of Progressive Web Apps and indicate the main benefits of using it in your business. In this article we will focus on presenting a few popular solutions for e-commerce on the market. But before we start describing them, one very important remark.

When considering PWA, at least two approaches have to be distinguished. The first one are the solutions which are a standalone PWA storefront for e-commerce that lets you connect with backend (e.g. Magento, Prestashop, Shopware) using an API. In this group we can point to Vue Storefront, Deity Falcon or FrontCommerce. In the second approach, the solutions offer a set of tools to build PWA – and in this group we will indicate for example PWA Studio and ScandiWeb. Let's start with Magento solution.

<p>PWA Studio</p>	<p>A set of tools that allows to develop, implement and maintain a storefront for Magento 2.</p>
<p>Launched in 2018, Magento PWA Studio is a new solution implemented in Magento 2 and it is designed to make conversion of e-commerce to PWA smoother. Magento PWA Studio uses modern tools and libraries to create a system and construction framework in accordance with Magento extensibility principle.</p> <p>Magento PWA Studio provides the following tools:</p> <ul style="list-style-type: none"> ▪ PWA Module: This tool provides modular help, server-side functions and is the basis for all topics created in Magento PWA Studio. It delivers Shell applications, manages RootComponent tasks, and integrates GraphQL workloads into server rendering for better optimization. Easy to install, this module is activated in the final phase and applies to all themes created in Magento PWA Studio. ▪ Pwa-buildpack: A set of necessary plugins and Webpack tools used to create Magento Studio PWA themes. It is also used to configure the local development environment of the Magento 2 platform. ▪ Peregrine: This is the React component library that simplifies the development of PWA Magento by providing basic functionality. Storybook JS, which provides documentation for developers, is also used. ▪ Venia storefront: Magento 2 site built with PWA Studio tools. Venia Storefront is a demo theme that can be used as a basic theme, built entirely with the above-mentioned tools. ▪ UPWARD: It is a server that could be considered as middle layer between PWA and APIs, it helps unify all APIs in one place, so there's no need of keeping track of multiple endpoints and how to access them. <p>Both developers and customers can benefit from the PWA Studio. Simply put, it allows to make online customers' purchase journey easier and faster. From a developer's perspective, the PWA Studio is a new front-end architecture which allows managing all channels via one code base, one deployment, and app. Of course, some weaknesses can be found as well.</p> <div style="border: 1px solid #ccc; padding: 10px;"> <p>What are the biggest pros and cons of using Magento PWA Studio?</p> <p>PROS</p> <ul style="list-style-type: none"> ▪ Providing expansion tools – you can use them in your local environment to create PWA applications. ▪ GraphQL usage – GraphQL includes declarative retrieval of data from queries without excessive retrieval. With a single back-end, you can manage multiple users from different sources. ▪ Easy configuration – Magento PWA Studio has an easy backend configuration process; allows you to clone the repository and assign the URL of the Magento instance to a .env file, and allows you to run the application efficiently after the command is executed. ▪ Strong community – an advantage, but also a trademark of Magento, is an involved and large community. The PWA Studio also benefits from this, having a lot of contributors from all over the world. <p>CONS</p> <ul style="list-style-type: none"> ▪ Lack of features – some of the functionalities are still in "to do" stage. ▪ Errors to deal with – at the moment there are still vulnerabilities that the Magento team is working on (e.g. how to validate the password when creating a new account). ▪ API is not ready – the GraphQL API prepared for PWA Studio is not fully ready for production implementation, and doesn't cover 100% of the functionalities available in Magento, such as language or currency change, etc. ▪ Supports only Magento back-end </div>	

<p>Deity Falcon</p>	<p>Progressive Web App library for any type of website. Fully Open Source, Platform Agnostic and headless.</p>
<p>DEITY Falcon, a result of the work of developers from the Dutch company DEITY, is a stand-alone but modular library to easily build headless PWA websites. Deity Falcon started in October 2017 with their first PWA solution. Over a year later, in November 2018 they released the first open source version. The solution is built using ReactJS, NodeJS and GraphQL, and supports Magento 2 PWA storefront, Wordpress PWA and BigCommerce PWA Storefront.</p> <p>During the development of Falcon, emphasis was placed on compliance with the principles of F.I.R.E., which means:</p> <ul style="list-style-type: none"> ▪ Flexible – PWA can be used to build a website, blog, shop or even a portfolio. ▪ Integrable – easy to integrate. ▪ Reliable – it is able to handle even very high traffic on the website and is easily scalable. ▪ Extensible – easily expandable with new personalized features. <p>When it comes to indicating possibilities and strong sides of this solution, it is worth noting that in DEITY Falcon you can work independently on the front and back-end, and this significantly affects the optimization of development time. This is not the only advantage.</p> <ul style="list-style-type: none"> ▪ It only takes a few minutes to get started with CLI tool create-falcon-app, which enables you to create an application based on DEITY Falcon with just one command. ▪ Client rendering (SPA) to increase page speed and reduce server load. ▪ Built-in Server Side Rendering (SSR) – you don't have to worry about SPA SEO complications. ▪ Service worker to provide application caching and PWA features such as offline capabilities and add to home-screen. ▪ Falcon's architecture allows it to be very modular, lightweight and scalable. 	
<p>Jamie Maria Schouren</p>	<p>Co-founder at DEITY</p>
<p><i>DEITY Falcon is a launching platform for Progressive Web Apps. It allows merchants to create highly engaging user experiences and ultrafast front-ends. With DEITY Falcon you can create a top performing Progressive Web Application based on standardised web technologies, fully enhanced with the newest JavaScript features, making them feel and function like true native Android and iOS apps. Working closely with top players such as Google and BigCommerce, DEITY Falcon is setting the new standard for modern web experiences. Combining both technological stability and full feature-rich web applications, DEITY Falcon is ready to revolutionize any webshop. It is built with the newest web technologies including NodeJS, ReactJS and GraphQL. Using these technologies, the Falcon PWA becomes highly scalable, reliable and extensible and immune to traffic overloads. DEITY Falcon has a unique architecture which allows for seamless integration with any existing platform, and unlimited scalable and extensible possibilities. DEITY Falcon can integrate with any data source, no matter the size, while handling millions of traffic hits at the same time. Blending mobile and web is a game-changer in the industry that will lead to astonishing business results—making this a can't-miss technology for retailers.</i></p>	

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