Paychex improves payroll services, supports agile transformation with Red Hat OpenShift

PAYCHEX®

Leading payroll and human resources (HR) provider Paychex pairs innovative technology with flexible digital services to create self-service tools supported by industry specialists. Its agile transformation to adopt collaborative DevOps and continuous integration and delivery (CI/CD) practices led to a restructuring of its IT teams and optimization of service creation, testing, and delivery using Red Hat OpenShift Container Platform and other Red Hat products and services. Paychex's teams now efficiently collaborate to create new services and updates for its customers, helping their end users focus on their core business by more easily submitting, accessing, and analyzing data for payroll, HR, and onboarding processes.

Software and services

- Red Hat® OpenShift® Container Platform
- Red Hat OpenStack® Platform
- Red Hat JBoss® Enterprise Application Platform
- Red Hat Enterprise Linux®
- Red Hat Consulting
- Red Hat Technical Account Management

Rochester, New York, United States ●

Headquarters
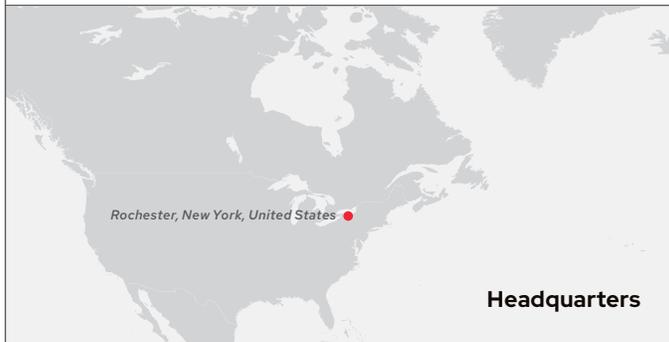
Financial services

14,000+ employees across the US and Europe

100+ locations

Benefits

- Improved proof of concept (POC) delivery time from months to hours or days

- Achieved average of 3-4 times more payroll product deployments with Red Hat OpenShift and continuous delivery approach

- Established foundation for multicloud IT with consistent, stable portability across on-premise and cloud environments

"Red Hat's been the right type of partner for us because of the engagement from sales to support to engineering. There's an opportunity to easily engage with senior technology and business leaders on where we should be taking our business, how to be successful running highly available services in alignment with our strategy."

Mick Whittemore
Vice President, Enterprise IT Operations, Paychex

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Agile development for on-demand payroll services

Paychex offers products that help clients of all sizes with payroll processing, record keeping, expense management, retirement services, insurance, and fully outsourced HR. An awarded industry leader, the company pays 1 in 12 American private sector employees[1]. Paychex pairs innovative technology with flexible digital services to create self-service tools that help clients focus on their core business.

"We serve small- to medium-sized businesses, from mom-and-pop bakery shops to landscaping and construction businesses," said Dave Wilson, director of infrastructure and architecture at Paychex. "If it's in the middle of the night and they forgot to give a bonus check to an employee, they can load our mobile app and do that work."

The company's in-house IT teams work together to create, test, launch, and update customer applications. Development demands, however, began to outpace the infrastructure team's capacity.

"A lot of our competitors are starting to offer disruptive online services. We also saw maturing technology that could be transformational for our customers, such as AI [artificial intelligence], chatbots, and natural language processing," said Wilson. "Our infrastructure teams recognized that they needed to help developers do more, higher-quality work to help us get to market faster."

Several years ago, Paychex began a transformation from traditional waterfall processes to agile development—supported by continuous delivery and DevOps collaboration—to focus on quickly creating, delivering, and updating valuable customer-facing services, ultimately attracting new business. "Quality, increased velocity, all the things that we want to achieve, collaboration is the foundation," said Steve Bell, senior manager, enterprise architecture, at Paychex.

The company also sought new technology solutions from an experienced vendor that would provide the necessary agile and cloud computing capabilities.

A transition to open source with Red Hat

Open source technology offered an ideal solution for establishing an infrastructure platform for iterative collaboration. "As we've transformed to agile, technology-focused development, it just makes sense to partner with organizations that function the same way," said Wilson. "Open source technology gives us the ability to deliver what our internal and external customers need in a way that differentiates us from our competitors."

The core of Paychex's new infrastructure is Red Hat OpenShift Container Platform, a solution from a trusted, long-time partner. "Red Hat is one of the most supportive partners we have. They're not just infrastructure-based. With their experience not just on the operating system, but also in middleware and even development practices, you're really looking at a partner that can span everything," said Bell.

The infrastructure team sought input and proofs of concept (POCs) from engineers, architects, and developers—eventually resulting in current production use of more than 4,000 active OpenShift containers.

Together with OpenShift, Paychex uses Red Hat OpenStack Platform to unite infrastructure workloads and application environments—including legacy, virtual machine (VM)-based, and containerized applications—in a single, self-service hybrid cloud infrastructure platform.

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>
> **Dave Wilson**
> Senior Director of Infrastructure and Architecture, Paychex

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3 https://www.paychex.com/newsroom/awards

Red Hat Enterprise Linux, the company's primary Linux server operating system, enhances the company's Infrastructure-as-a-Service (IaaS) application delivery. To support its core payroll platform, used to pay millions of people every year, Paychex manages common, repetitive tasks with Red Hat JBoss Enterprise Application Platform.

Paychex engaged Red Hat's service teams to ensure its staff quickly gains confidence in working with OpenShift and containers, including four weeks of training for infrastructure engineering teams and ongoing technical support from its Red Hat Technical Account Manager (TAM).

"Red Hat's been the right type of partner for us because of the engagement from sales to support to engineering," said Mick Whittemore, vice president of enterprise IT operations at Paychex. "There's an opportunity to easily engage with senior technology and business leaders on where we should be taking our business, how to be successful running highly available services, in alignment with our strategy."

Efficient customer-facing development

Delivery in hours or days, not months

A key benefit of Paychex's agile transformation is greater productivity. With OpenShift Container Platform, Red Hat OpenStack Platform, and Red Hat Enterprise Linux, developers and operations staff can take advantage of new DevOps practices and capabilities. For example, OpenShift and OpenStack provide automatic provisioning of testing environments, providing a mix of compute resources to reduce dependency on infrastructure teams.

"With OpenShift, we're able to blur the lines between infrastructure, operations, middleware, and development," said Bell. "Operations can share their requirements and safeguards to ensure developers comply with operational standards. It's typical to deliver a PoC in days or hours now, instead of three months."

Paychex's middleware and infrastructure teams can now focus on ensuring critical stability for customer-facing environments, while developers can use self-service tools created by those teams to configure releases and provision resources. As a result, the entire company can better focus on providing stable, innovative services for businesses who use them to pay, insure, and manage employees.

Improved customer experience

Paychex's shift to agile development has improved its response to evolving regulations, ensuring feature updates and issue fixes are quickly provided to customers — and helping Paychex lead a competitive market.

"Our development teams using OpenShift have, on average, three or four times more product deployments, equating to more features to our end users faster," said Wilson. "We're not having to take the platform down, deploy, and then bring it back up. When your customer base could be punching in at midnight for a shift or calculating tips at the close of business, you can't have a downtime window in the middle of the night."

One key example is the company's response to new tax regulations. Thanks in part to OpenShift and its new platforms, Paychex updated its tax payment platform within a week of publication of tax law reforms.

"Another great example of how Paychex helps our clients is a landscaping foreman. On the way home from work, he stops for gas when he realizes that he has to run payroll. He opens the Paychex mobile app and sees that his cash requirements are a little high, but it doesn't seem like he's had more work

come in," said Wilson. "He's able to quickly understand that one job is working overtime. The app then uses reporting to tell him that if demand continues to grow, he'd be better off hiring an additional person. All before he's done pumping gas."

Portability across environments

OpenShift also provides an agile foundation for the company's planned multicloud environment.

"We knew that cloud enablement was critical to our future," said Wilson. "When you have many tightly integrated products, you want to invest in new development where you have flexibility."

Now, processes for application and service development are consistent across enviroments — whether on-premise or cloud — helping the company take full advantage of cloud-based services while maintaining high quality and availability.

A path to multicloud

Its success with OpenShift and other open source technology has helped Paychex establish a foundation for a cloud-based future. "As we continue to redesign our software and update our infrastructure, there's always a cloud-first, cloud-ready strategy. OpenShift is the framework to get our services on that new cloud architecture," said Bell. "We're now talking about using it for our customer-facing applications, web services, and user interfaces, for any project."

Paychex continues to evaluate new ways to improve — for example, reducing total cost of ownership (TCO) by switching from VMware to Red Hat Virtualization. The company hopes its transformation serves as inspiration to other companies.

"Focus on culture first. Focus on the business problem and new ways of solving it, then find good partners and tools," said Wilson.

About Paychex

Paychex, Inc. (NASDAQ: PAYX) is a leading provider of integrated human capital management solutions for payroll, human resources, retirement, and insurance services. By combining its innovative Software-as-a-Service technology and mobility platform with dedicated, personal service, Paychex empowers small- and medium-sized business owners to focus on the growth and management of their business. Backed by more than 45 years of industry expertise, Paychex serves over 650,000 payroll clients across more than 100 locations in the US and Europe and pays one out of every 12 American private sector employees. Learn more about Paychex by visiting www.paychex.com, Twitter, and LinkedIn.

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