



Solution Case Study



REDEFINING THE WORLD OF PAYROLL + HR

Company: Paylocity
Website: www.paylocity.com
Company Size: 500 employees
Country or Region: United States
Industry: Professional Services

Company Profile

Paylocity provides hosted payroll, HR, online benefits enrollment, and time & labor management solutions. The company is based in Arlington Heights, Illinois.

Software and Services

- Microsoft Visual Studio
 - Microsoft Visual Studio Ultimate 2012
 - Microsoft Visual Studio Team Foundation Server 2012
- Technologies
 - Microsoft .NET Framework 4.5
 - ASP.NET MVC 4

"We are saving several minutes a day per developer just from these enhancements to the IDE."

Chuck Cooper, CIO, Paylocity

For more information about other Microsoft customer successes, please visit: www.microsoft.com/visualstudio

Hosted Solution Provider Builds Mobile Functionality with MVC 4

"With the extensive list of new features and enhancements, Visual Studio 2012 is a must-upgrade release for developers."

Chuck Cooper, CIO, Paylocity

Paylocity wanted to add mobile functionality to its hosted payroll and human resources' solutions while still maintaining a single code base. When it determined that ASP.NET MVC 4 provided a great method for doing this it decided to upgrade to Microsoft Visual Studio 2012. It also found that Visual Studio 2012 provided many additional capabilities that raised its developers' productivity by several minutes per day.

Business Needs

Paylocity provides payroll, HR, online benefits enrollment, and time and labor management solutions through a software-as-a-Service (SaaS) model, along with complementary professional services. Paylocity maintains a 97 percent client retention rate by focusing on customer service and delivering industry-leading technology.

Paylocity has long used Microsoft software to develop applications because it meets the company's mission-critical requirements for availability, scalability, and security. "Our business strategy has been to leverage Microsoft technology innovations," says Chuck Cooper, Chief Information Officer at Paylocity. "Our clients trust Paylocity to ensure that their employees are paid accurately and on

time, and we trust the Microsoft platform to ensure that we continue to achieve that goal—even as we continue to grow at a rapid pace."

Paylocity also chose Microsoft software because it offered superior developer productivity. "When we first started building SaaS solutions the primary concern was to provide the best development environment," says Cooper. "After evaluating all of the options we found that Microsoft .NET would enable us to deliver rich and robust solutions much faster and easier." Paylocity most recently used the Microsoft Visual Studio 2010 Premium development system for software development and relied on Microsoft Visual Studio Team Foundation Server 2010 for all aspects of Application Lifecycle Management (ALM).



Always wanting to provide the latest technological innovations to its customers, Paylocity decided to upgrade its products to take advantage of mobile technologies. "Since our employees are the most valuable assets we have, we want to ensure we use their time efficiently," says Cooper. "We are a Microsoft shop and I didn't want my developers to have to learn new languages like Objective C and Java to program mobile applications. I wanted to have one code base developed for HTML5." When Paylocity learned that Microsoft Visual Studio 2012 provided support for ASP.NET MVC 4 along with HTML5 and jQuery Mobile, the company immediately upgraded to take advantage of these technologies. ASP.NET MVC 4 is a framework for building scalable, standards-based web applications. The fourth version focuses on making mobile web application development easier.

Solution

Paylocity adopted pre-release versions of Visual Studio Ultimate 2012 and Visual Studio Team Foundation Server 2012 and began working on upgrading its code to MVC 4. While MVC 4 was the impetus for its quick adoption of Visual Studio 2012, Paylocity rapidly found that many other improvements to the Visual Studio 2012 integrated development environment (IDE) and for ALM made the upgrade even more valuable.

Paylocity is using the default project templates in MVC 4, which are HTML5 compatible, to start projects quickly. "When you're starting a new project, you want to get into the meat of the problem right away," says Cooper. "With the MVC 4 default templates, the upfront work is simplified so we can just start developing rather than taking weeks or months to create a template."

Paylocity also utilizes the Display Modes feature to let the application select views depending on the browser being used. "Because MVC 4 can detect the browser and automatically render the appropriate view, I can reuse the same business logic and the same data," says Cooper. Paylocity is using Adobe® PhoneGap™ to package the code

for distribution in the various app stores. Cooper adds, "Because everything is developed in HTML5, I can also host a version for mobile users who haven't downloaded an app." This solution provides a lot of flexibility without requiring a lot of different coding skills or resources.

Additional changes to Visual Studio 2012 have also made the development process easier by incorporating capabilities that used to require third party tools or application outside of the IDE. "I used to rely on a lot of third party products and would have to go back and forth between applications. Now everything I need is included in Visual Studio. I don't have to leave the IDE anymore," says Cooper. Some of the built-in capabilities that make development easier at Paylocity are:

- **Page Inspector** – Renders a webpage directly within the Visual Studio IDE and makes it easy to edit the source for any rendered element.
- **Storyboarding** – "Although we use PowerPoint for our Storyboards, we'd have to use third party tools and copy screenshots into the slides," says Cooper. "Now we can open the built-in PowerPoint Storyboarding from a backlog item and mock something up quickly with the built-in templates." When the storyboarding presentation is saved, the file is linked to the backlog item and is easily accessible from within Team Foundation Server.
- **Debugging** – Enables developers to select from multiple browsers and mobile emulators when debugging a Web application.

Paylocity also found the improvements to the ALM functionality in Team Foundation Server 2012 to be valuable in improving its project management processes. The agile project templates are easier to use and help with standups, daily Scrums, and keeping the project status updated. Paylocity also likes the code review and feedback functionality. "We have remote employees, and we can more easily involve them in code reviews. Reviews are easy to initiate and the whole process is contained

within Team Foundation Server 2012," notes Cooper. He continues, "With the Microsoft Feedback Client we continuously get feedback from project sponsors and end users and can potentially save months of development in the wrong direction."

Benefits

Paylocity developers quickly discovered that Visual Studio 2012 had a lot to offer in terms of improved capabilities. "When we originally looked at Visual Studio 2012 we thought the biggest selling point was MVC 4, which enables dynamic rendering based on the target platform," says Cooper. "But as we got into it we found that MVC 4 was only one of a number of really important enhancements. With the extensive list of new features and enhancements, Visual Studio 2012 is a must-upgrade release for developers."

Fast Development

Paylocity put its first .NET Framework 4.5 application, an internal application for its finance organization, into production in 12 days. The responsiveness facilitated by Visual Studio 2012 enabled the IT organization to avoid outsourcing that work to a consultant.

Development is faster because developers can stay in the IDE for almost everything they need to do instead of switching between applications. The IDE loads faster and is more responsive overall, even with multiple instances of Visual Studio open at the same time. "We are saving several minutes a day per developer just from these enhancements to the IDE," says Cooper.

Future Proof Code

Paylocity can more easily add mobile functionality to its application by using the MVC 4 templates. Developing in MVC 4 to HTML5 standards also brings peace of mind. "I can't predict what hardware form factors will look like in a few years, but I'm confident that HTML5 is something that everyone will be supporting," says Cooper. "By developing the codebase in HTML5 using MVC 4 we are in a position where we can quickly evolve with the market."