ICENIUM™

Cross-Platform Mobile Development. Simplified.™

Icenium™ Product Overview 2012

>The biggest opportunity is also the biggest challenge. At least, it was.

Mobile apps present a huge opportunity. Anyone with a smartphone has a great idea for the next killer app, but even developers face a big hurdle in bringing their ideas to life—there's a steep learning curve to develop native apps. And if you want it to work across all popular smartphones and tablet platforms, you're looking at building and maintaining separate apps for every platform. (As if one platform isn't hard enough.)

Icenium simplifies cross-platform mobile development and makes it incredibly easy for web developers to use their current skills to build, test, and publish for all of the most popular mobile platforms and devices. You can use mobile UI frameworks like Kendo UI Mobile to build apps that align with each individual platform they run on, or jQuery UI Mobile to create mobile apps that look consistent across platforms. Building cross-platform mobile apps just got simplified.

Icenium is poised to be the leader in an emerging category of software development tools—the integrated cloud environment (ICE). Unlike traditional integrated development environments (IDEs), ICEs combine the power and flexibility of cloud-based services with the convenience of a modern coding environment. The development and target platforms no longer matter. How? ICEs distribute the work. A client tool handles design and coding activities, while cloud servers and services support the target platforms for compiling and deployment. **The big bonus? You can access your code on nearly any Internet-connected computer, from nearly anywhere, at any time.**

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> A tool for developers, not for a platform.

Like the browser wars of the 1990s, the mobile platform arena is very competitive and non-standardized. Each provider has unique SDKs, different languages, and different tools. To target the most relevant platforms out there, you need a Mac and a Windows environment, as well as all of the individual proprietary platform SDKs. Plus, it takes a ton of time, energy, and resources to learn Objective-C for Apple iOS and Java for Google Android, not to mention build for one of those platforms, only to rebuild for the other. Clearly, the platform providers care more about their technology than the developers' need to work across all platforms.

So. How to make it easier? Hybrid apps. With your web development skills, apps can run on multiple devices. The only catch is that you still need the SDKs for the platforms, along with multiple development environments to build the app containers.

Enter Icenium. We've turned the tables and created a tool focused on developers instead of platforms. (You're welcome.)

Icenium is a platform-agnostic, cloud-based environment that gives developers the features and tools they need to build hybrid applications quickly. It's a state-of-the-art, lightweight development tool that helps you get more done quickly. It's packed with all the modern capabilities developers expect, including syntax coloring and formatting, real-time error detection, refactoring, code navigation, and integrated version control.

You'll see how apps look and behave before deploying to physical devices. And you can even review changes made in real-time across all connected devices without having to recompile. **Pretty magical when you see it in action.**

Every bit was written with developers' best interests in mind. Get started coding instantly, avoid long download or install times, and enjoy the freedom to work from anywhere. Finally, you can focus on innovating and bringing your great app ideas to life, **without being tethered to a place or to a platform.**

UNLIMITED POSSIBILITIES FOR MORE INTERACTIVE AND ENGAGING CONSUMER AND BUSINESS APPS:

- Marketing campaigns
- Conference calendaring
- Content/magazine apps
- Stock and investment tracking
- News feeds
- Sports scores—real and fantasy
- Political updates
- Nonprofit fundraising
- Notes, lists, and to-dos
- Airline check-in and ticketing
- Reservation engines
- KITT-esque* navigation apps
- Catalogs and shopping
- And much more

*While there is no evidence that the Knight Industries Two Thousand (KITT) used Icenium, it clearly demonstrates a correct application of the technology.

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Top **8** features

Use existing HTML5 and JavaScript skills.
Reuse existing skills from web development and Apache Cordova to build hybrid applications that run natively on Apple iOS and Google Android mobile platforms. With Cordova you can easily leverage device APIs—including those for camera, accelerometer, geolocation, and more—using standard web languages (HTML5, CSS, and JavaScript). You don't have to take time learning new languages in order to create compelling cross-platform apps for smartphones and tablets.

Forget about SDKs, leave it to the cloud.
Our cloud services manage all of the platform dependencies for you, so you can focus on apps, not on development environment. No need to download, configure, and manage multiple development environments and numerous SDKs. Icenium puts SDKs in the cloud, an unprecedented approach that decouples the development and compiler environments, enabling you to focus on your work, without the headache of managing platform-specific details.

Realistic device simulation and powerful debugging.
Iterate quickly on your design with the Icenium device simulator to see how your application looks and feels without ever having to deploy to a physical device. The device simulator enables you to test the behavior of an app across multiple platforms and form factors. The debugger interacts with your code and has views for elements, resources, and the console. That means you can view and modify the document object model (DOM), see console messages, and much more.

Real-time updates on multiple devices.
Check out your changes as you make them—instantly—on all your mobile devices. Using Icenium LiveSync you can see changes made in real-time in the integrated device simulator and across all connected devices without having to recompile.

Access your project code anywhere, anytime.
The cloud-based architecture of Icenium lets you work from almost anywhere. Your project files and assets are stored safely in the cloud, making them accessible from almost any Internet-connected computer. Using Icenium Mist—the browser-based coding environment—you can work from almost any computer without having to install anything. Mist also works in tandem with Icenium Graphite, an installed Windows client—and you can switch between the two seamlessly. Your projects, files, and saved state are available to you wherever you go.

Integrated version control.
Integrated version control means your code is safely stored and versioned in the cloud, remaining accessible to you anywhere, at any time. Support for GitHub and other URL-based Git repositories makes collaborating on your project a breeze, regardless of your team's geographical distribution.
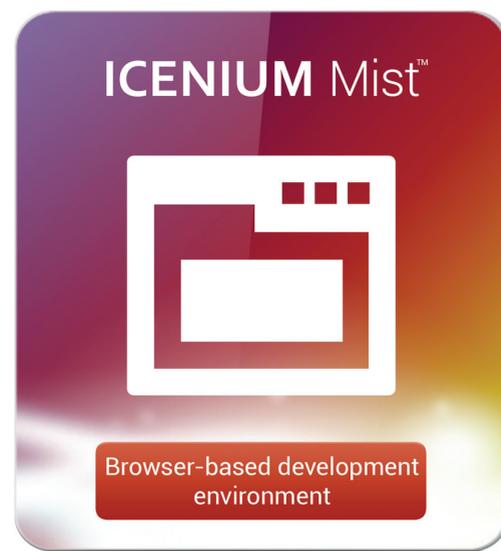
Say goodbye to provisioning.
Icenium Ion makes deploying and testing your apps on any iOS device a snap, by eliminating the need to provision them. Simply install Ion (available in the Apple App Store) and scan the QR code shown on the screen when you run a project. In seconds, the app is installed and running inside Ion. Making changes? Simply press three fingers to the screen of the iOS device, and the app will fetch the changes and update itself.

App publishing assistance to get you across the finish line.
Publishing to the Apple App Store or Google Play expands your reach to more users, but can also be a hassle. Not with Icenium. With built-in support for preparing your project for publishing, the headache of dealing with the App Store and Play is gone. Icenium provides the guidance and assistance to make publishing your app as simple as it was to build it.

ICENIUM Graphite™

Locally installed modern development environment

ICENIUM Mist™

Browser-based development environment

> # In the cloud and on your desk.

An Icenium subscription gives you the whole toolset, including **Icenium Graphite,** the installed version for PCs, and **Icenium Mist,** the browser-based version. Both work in tandem to give you the best modern productivity tooling and portability. Don't worry, all the goodies you need—syntax formatting, color-coding, version control, and more—are in both.

Mist is a must.

Icenium was built with the vision that hybrid apps could be developed using a lightweight, cloud-based toolset that's always on and available everywhere. Mist is the browser-based coding environment that lets you work from virtually any computer. You can access all of your projects from any Internet-connected computer, whether you move from your desk to a conference room, your home office, the sofa, or a coffee shop around the corner.

The upside to Graphite.

Icenium Graphite can be downloaded and installed in just a few minutes.* All of your project files are still in the cloud, so you have access to them while you enjoy powerful Graphite capabilities, like real-time code analysis and error detection, code navigation, and refactoring. As an installed toolset, Graphite has the ability to take advantage of Icenium LiveSync so you can see changes to your apps made in real-time, across all connected devices, each time you save.

Depends on how good your Internet connection is, obvs.

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Getting wired over a coffee shop app.

Jitterz Coffeehouse is a national chain that wants to get in the app game. Nothing too fancy, but they want to liberate their customers from having to carry prepaid cards and allow them to use their phones for purchases instead. They'd also love a GPS-based store locator, so customers can find a nearby Jitterz in their hometown or while traveling. Bonus features would offer the ability to push promotions and discounts, plus let customers review their balances.

To build the application, Jitterz turns to the boutique marketing agency that built their website. While the agency hasn't yet built an app, they're anxious to add it to their list of services—since other clients are bound to ask. They agree to tackle the project.

From a technological point of view, it's a lot like a mobile website. But the app needs to function outside of wireless networks. The big concern is that, with such a diverse customer base, the app will need to target a staggering number of devices. A decision is made that iOS and Android platforms are the top priorities.

REQUIREMENTS:

- Allow customers to pay for drinks with device
- GPS-driven store locator
- List of favorite drinks
- Discounts and promotions
- Integration with user accounts

Jaxon is assigned as the project lead. As a web dev, he's got HTML5 and JavaScript in his blood. After poking around a few forums to learn where to start, he discovers Icenium. Boom! He doesn't have to learn Objective-C and figure out how to port it to Android (or build two completely different apps, which would blow the budget and the timeline).

He signs up and gets going immediately. All the features he relies on—like statement completion, code navigation, and refactoring—are there, without the score of bulky tools that he uses only a few times a year.

First step: pick a template. Jaxon decides to use Kendo UI Mobile template. Working with Kendo will modify the look and feel of the app to map to the device, meaning the app will look and function like native iOS and Android apps, including the look of the buttons and the placement of the navigation. Going this route will make the Jitterz app more intuitive for the users.

Jaxon has ordered all of the target devices to test on. But while he's waiting for them to ship, he uses the integrated device simulator to get an idea of how his app is going to look on the different devices. Once the devices show up, Jaxon uses Icenium LiveSync to quickly iterate between writing code and testing on the entire device lineup.

The integrated device simulator in Graphite shows how the app will look on an iPhone.

Jaxon makes a lot of progress in just a few days, since he's using JavaScript for all the in-app logic and connecting to existing Jitterz website services. After just a couple of days of development time, he's cranked out the core feature set. Because Icenium projects depend on Apache Cordova, Jaxon is able to access the geolocation APIs of the devices and incorporate the GPS features to the store locator requirement.

The night before the first client deadline, Jaxon realizes he forgot to incorporate the promotional discount functionality. It's a small add—but a huge miss. No sweat. He pops open his laptop at home, jumps onto Icenium Mist, and spends a couple of hours getting it done.

The first release is a huge hit, but the client finds a critical bug. Some of the UI elements are not rendering properly on Android devices that Jaxon didn't have access to. The various screen sizes and dimensions were an unexpected trouble spot. The integrated debugger becomes a lifesaver as Jaxon tracks down the UI elements and the CSS rule sets that control them. In no time, he is able to add some responsive CSS rules to change the layout for a few standard screen sizes and resolutions.

Mist simply runs in a browser, and provides the capabilities that make building apps fun.

Once the final revisions are taken care of and the client signs off, the Jitterz app is almost ready to get published. Working with the Jitterz brand manager, Jaxon adds icons and splash screens to the project, as well as key screenshots and a brief description. Using Icenium, Jaxon packages the app for publication to the Apple App Store and Google Play, and within a few days the apps are approved and available for customers to begin using.

The app is a huge hit for Jitterz customers—and a great addition to Jaxon's resume.

PRODUCTIVITY FEATURES:

- Integrated debugger
- LiveSync
- Device simulator
- Apache Cordova
- Kendo UI Mobile and jQuery UI Mobile templates
- Always on, accessible anywhere

Mastering mobile expense reporting.

BizEngines Office Machines sells and maintains the equipment that makes businesses hum. It's got a mobile sales force of 85 people—a team that, while super effective, finds expense reporting tedious, cumbersome, and inefficient. A recent audit by management showed that sales reps were spending nearly 20% of their time on administrative tasks. That's 20% less time spent selling.

Maintaining the lead database is a task that can't be streamlined, but the big time suck for salespeople is reporting all their expenses from the road. Keeping receipts, taping them to a piece of paper, scanning them, replicating it all in an Excel spreadsheet, getting management approval, then uploading it all to the intranet via VPN is a major hassle. Senior leadership at BizEngines has decided it's worth the investment to build an app that will streamline the process.
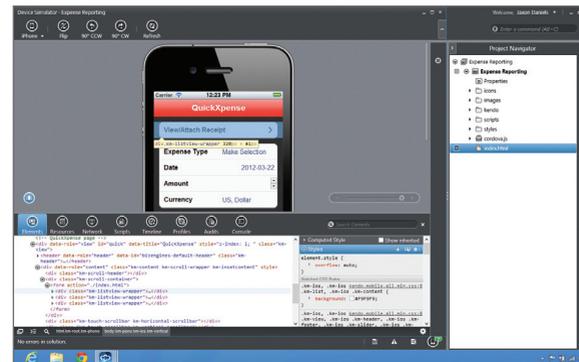
The catch? They'll do it only if they can use current staff and keep the costs under control. It seems like a tall order, but the executives flip the idea over to the IT manager to see what can be done.

Gina, in charge of IT, raises an eyebrow. Thanks to recent mergers and acquisitions—and the fact that sales folks at BizEngines get to work on their own devices—she's already up to her ears in maintenance work just to keep everything up and running. There are iPhones, Android devices, and dozens of tablets and iPads to worry about every day. But if it's important to senior leadership, it had better be important to Gina.

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Ultimately, Gina gives the project to Irena, who has been anxious to build her skillset to move into mobile app development in her next job. Irena has been inspired by all the consumer apps she uses every day, and she is psyched to tackle the project. She wants it to be as slick, fast, and functional as the apps she uses to manage her grocery lists and figure out bus routes.

Her enthusiasm is great, but as a web developer, she doesn't know squat about native mobile app development. Or does she?

At an HTML5 user group meeting a few weeks ago, she heard about Icenium. It sounded cool, so she checks it out. The free 30-day trial should give her more than enough time to get her feet wet and see if she can meet her two-month deadline along with all the app requirements (and tackle her day-to-day tasks that haven't gone away). It's certainly faster than learning Objective-C and Java to build two apps from scratch.

Debug your app while it's running in the device simulator, while collecting console messages from connected devices.

First step: eat lunch at her desk and check it out. The problem? Once she signs in and powers it up, Irena is ready to go before she has a chance to unwrap her sandwich.

Everything looks familiar: syntax coloring and formatting, error detection, refactoring, code navigation, version control...it's all there.

Irena is able to quickly define the outline of the app, upload some images, and use the integrated device simulator to get a quick idea of how her app will look on an actual device.

Irena works with Gina to expose the existing expense-reporting database through a series of web services that she calls from her app via JavaScript. Then, since Icenium projects are based on Apache Cordova, she easily incorporates the device capabilities. GPS sensors confirm the expense location to minimize abuses. And the camera is used to capture digital images of receipts that will be attached to the expense report, so the physical copies can simply be filed back at the office. This is epic, awesome, and super easy.

During her downtime between day-to-day tasks, Irena has a working prototype on an iPhone, Galaxy S III phone, and Kindle Fire tablet in just a couple of weeks. Turns out it's FUN to build a mobile app. Her confidence is boosted. She's even more relieved that she didn't have to pick up any new languages or ask Gina to buy her a Mac.

She iterates quickly, gets feedback from Gina and the management team, and rolls out a beta to select members of the sales team. Since this is a beta, and they aren't ready to publish the app yet, Irena makes the Android version available for installation directly from a link on an internal server. That's great, but it's not supported on the iPhone. She gives her iPhone beta users instructions to download Icenium Ion and publishes a QR code they can scan to get the expense reporting app loaded inside the Icenium Ion testing utility. Piece of cake. All her beta testers are taken care of.

Once the executives hear the great feedback from the internal beta, they green-light the project and approve getting an Enterprise Distribution License from Apple. After all, this is likely to be just one of many internal mobile apps to come.

Irena is a hero once the end product is rolled out. She's also amped to stay at BizEngines instead of hunting down a new gig, since this boss is challenging her (in a good way!) and helping her add to her portfolio.

Everything looks familiar: syntax coloring and formatting, error detection, refactoring, code navigation, version control...it's all there.

Scan an on-screen QR code, and the app will be loaded into Ion (iPhone, iPad, and iPod Touch) or directly onto your device (Android).

❯ Benefits to developers.

- Don't be intimidated by proprietary mobile languages—if you can code for the web, you can build a mobile app.

- Target the most popular platforms and mobile-device form factors using just one tool.

- Say goodbye to multiple SDKs. Icenium is all you need.

- Work on your projects anywhere you've got a machine and an Internet connection.

- Build once, target many. There's no need to build, deploy, and maintain multiple versions of the same app.

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>Benefits to companies.

- Build line-of-business apps that meet your unique business requirements.

- Make mobile apps within a reasonable budget and time frame, get to market faster, and see a swift ROI.

- Streamline processes that allow for offline enablement on mobile devices.

- Adapt to bring-your-own-device (BYOD) policies without adding another layer of device management.

- Leverage in-house skillsets to get the job done without the cost of outside consultants.

> ❯ Benefits to agencies.

- Extend marketing campaigns, promotions, and sweepstakes to an app environment.

- Give your clients what they're asking for without adding staff or contractors.

- Boost dev-team morale with new challenges that expand their portfolios.

- Add new service offerings with minimal investment and maximum ROI.

- Unleash team creativity with your own self-promotional app to delight your clients and customers.

Go to **icenium.com** to learn more
or start your free trial.