

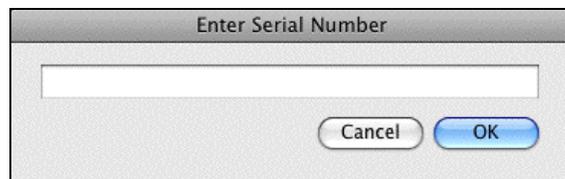
Protect Adobe Air Application

Excel Software

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An Adobe Air application is a mix between an Internet based application and a traditional desktop application. The application gets installed or uninstalled on a computer like a desktop application, but executes within a controlled runtime environment. This paper describes how to monetize an Air application by protecting it with an activation process.

Software activation is the process of enabling newly installed software to run on a specific computer. Software vendors use an activation process to ensure that only paid customers can run their software and to enforce license restrictions. On first launch, a dialog can accept a Serial Number, then validate and activate the software license using an online activation server.



QuickLicense is part of a family of tools for software protection, license management and automated software activation. These tools support computer specific manual or online activation, time or execution limited Trial licenses, perpetual licenses, software subscriptions, floating licenses, plugin protection, secure license portability, business system integration and extensive vendor customization.

AirLicense is a simple SDK (Software Development Kit) to easily apply QuickLicense protection to Adobe Air applications running on Windows XP, Windows Vista, Windows 7 or Mac OS X computers. No complex programming is required, just paste in a few lines of ActionScript code.

The security model built around an Air application makes it somewhat difficult to execute and communicate with external applications. AirLicense provides an ActionScript function interface to the QuickLicense runtime executable with a few drop-in components. As an added benefit, Air developers now have full access to local computer resources by allowing external executables to be run with one ActionScript command.

Configure the License

The QuickLicense application is used to configure a license. The configuration process involves setting checkboxes, typing names and URLs that determine the kind of license, activation process, license options, the URL of an optional online activation server page. The licensing user interface can also be customized with vendor specific strings or different languages.

Once the license has been configured, the Build Ticket button generates a tiny encrypted Ticket file that is copied into the bin folder of an Air project. QuickLicenseRT is the runtime file that implements the configured license and is also added to the bin folder.

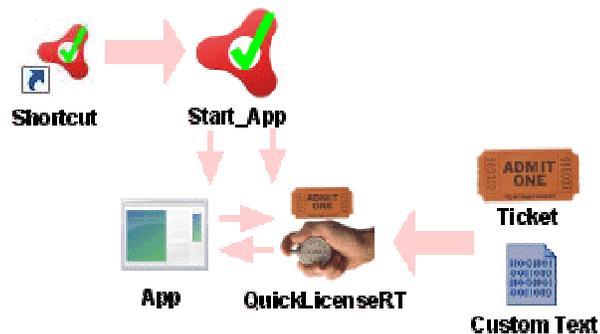
Call the Runtime

When an Air application is built and packaged, the development process creates an Air file that can be downloaded and installed on the user's computer. After installation, the installed folder on Windows contains an executable file and various support files. On Mac, those files are packaged together within the application bundle.

To implement the protection process, QuickLicenseRT must be executed. Unfortunately, the security model built around an Adobe Air application makes it difficult for the Air application itself to reliably run executables across various OS and Air runtime environments.

To simplify the process for developers and users, AirLicense slightly modifies the application launch process as illustrated here. Normally, a Windows user double-clicks the Shortcut icon that launches App.exe installed by the Air file.

With the modified start process, the Shortcut icon launches Start_App that starts both App.exe and QuickLicenseRT.exe so they can communicate, then quits itself.



The AirLicense SDK (Software Development Kit) consists of an ActionScript class that interfaces to QuickLicenseRT and a Start program that launches QuickLicenseRT and the installed air application. It comes with a User Guide that contains step-by-step implementation instructions.

AirLicense was designed to drop into an Air development project and work with existing Air development tools. Since the QuickLicense runtime interface is delivered as an ActionScript code file, it can be customized and adapted if needed. To minimize changes to the development or user experience, the standard Adobe Air application installer is used.

AirLicense includes two ActionScript source code files. The License.as file is added to the src folder of the project to define the License class. The Main.as file implements the HelloAir sample project by calling the Validate function of the License class.

```
var QL:License = new License();  
var ReturnCode:int = QL.Validate("YourLicense","1.0","999","");
```

If ReturnCode from the Validate function is negative, QuickLicenseRT can be configured to present an appropriate message to the user, otherwise the license has been validated so your application should run normally.

Conclusion

The AirLicense page at www.excelsoftware.com has a downloadable HelloAir application to demonstrate the activation process on a Mac or Windows computer.

AirLicense works with QuickLicense Standard or Pro edition. To protect an Air application, you'll need QuickLicense and AirLicense for each deployment platform (Mac or Windows). Excel Software grants royalty-free distribution rights for deployable components to any vendor with a product license.

For higher volume applications, a vendor can setup an account on the Safe Activation Service. This allows the vendor to collect customer information during the activation process and sell Serial Numbers. Customers enjoy 24x7 online activation. Advanced features like secure license portability between computers, notification messages or remote license suspend can be enabled.

Alternatively, WebActivation is a self-hosted online activation server. Visit the Excel Software web site for demonstration videos, white papers or more information on licensing solutions.