

# JAR PROTECTOR

## **USER MANUAL**

Version: 1.0.3

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# 1 INTRODUCTION

ABSTRACT	JarProtector is a java application to encrypt jar files. The encrypted jar files are protected from extraction and decompilation. JarStarter is a java application to start other java applications with encrypted jar files in class path. This document describes the usage of JarProtector.
TECHNOLOGY	JarProtector is based on a Decryption ClassLoader which is able to load the encrypted class files direct into the native JVM.
PACKAGE	JarProtector consists of two jar files: JarProtector.jar: Used to encrypt and protect jar files. JarStarter.jar: Used to start java applications with encrypted jar files in classpath.

# 2 JARPROTECTOR.JAR

ABSTRACT JarProtector.jar is used to encrypt jar files.

STANDARD CALL Example:

```
java -jar JarProtector.jar  
./path/to/my1st.jar; ./path/to/my2nd.jar
```

The main argument to JarProtector.jar is a separated list of jar file paths (relative or absolute). The path separator is operating system dependent:

Windows: semicolon

Mac OS X: colon

Linux: colon

For each jar file in main argument, an encrypted car file is created in the same location as the jar file exists. In the example above the car files ./path/to/my1st.car and ./path/to/my2nd.car will be created.

The exit code is 0 on success, != 0 on failure.

## EXTENDED CALL

Example:

```
java -jar JarProtector.jar ./path/to/my.jar -jre
./path/to/jre8 -jre ./path/to/jre9
```

The optional argument `-jre [path]` can be added multiple times and defines the JREs, the application is allowed to run with. The application will fail if an unknown JRE tries to start the application. This helps to prevent attackers to use their customized JRE.

## VERSION

Example:

```
java -jar JarProtector.jar -version
```

Shows the version of JarProtector, JRE and OS.

## HELP

Example:

```
java -jar JarProtector.jar -help
```

Shows the usage of JarProtector.

## LICENSE

When you run JarProtector for the first time, you are requested to enter the serial number received by email.

## 3 JARSTARTER.JAR

### ABSTRACT

JarStarter.jar is used to start a java application with encrypted jar files in classpath. JarStarter.jar will be distributed with previously generated car files to your customer.

### STANDARD CALL

Example:

```
java -cp
JarStarter.jar; ./path/to/my1st.car; ./path/to/my2nd.car; t
hirdparty.jar com.bfa.JarStarter com.my.App arg1,
arg2, ..., argn
```

Set the classpath as usual, including the previously generated car files. Add the classname 'com.bfa.JarStarter' as first argument to start JarStarter. All other arguments are the same as you would use to start your application without JarStarter. com.my.App is the class containing the main method of your application. arg1 ... argn are the arguments used by your application.

JarStarter returns the exit code of your application or an exit code != 0 if your application could not be started.

VERSION

Example:

```
java -jar JarStarter.jar -version
```

Shows the version of JarStarter, JRE and OS.

HELP

Example:

```
java -jar JarStarter.jar -help
```

Shows the usage of JarStarter.

## 4 THIRDPARTY FRAMEWORK

ABSTRACT

JarProtector uses its own ClassLoader to decrypt the protected classes/resources during runtime. If you use a thirdparty framework or API to access the protected classes/resources, you have to configure the framework/API to use the JarProtector ClassLoader. Otherwise, the protected classes will not be visible/valid for the framework/API. You can access the JarProtector ClassLoader in your applications main method:

```
public static main(String[] args) {  
    ClassLoader clsLoaderJarProtector =  
    MyApp.class.getClassLoader();  
    ...  
}
```