

PaperCut | Custom External Credit Source (Java) - Quick Start Guide & Developer Guide

This guide is designed to supplement the *Payment Gateway Module* documentation and provides a guide to installing, setting up, and testing the *Payment Gateway* module for use with a *custom External Credit source*. The main *Payment Gateway Module* documentation may be downloaded from:

<http://www.papercut.com/files/pcng/ext/payment-gateway/PaymentGatewayModule.pdf>

The external credit source extension mechanism allows system developers to implement their own external credit source for the payment gateway. Possible external sources could include:

- Conducting transactions on an external database system.
- Interacting with a student management/payment system in real-time.
- Making web services calls across to a 3rd party stored value system.

The external credit sources take the form of a Java Class that implements a predefined interface. The class is dynamically loaded at runtime and called to execute the transaction/withdraw operation.

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1 Developing an external credit source:

1. Install the module into the same directory as PaperCut NG. This is normally
C:\Program Files\PaperCut NG
2. Add the file
C:\Program Files\PaperCut NG\server\lib-ext\ext-payment-gateway.jar
to your Java project's classpath.
3. Write a class that implements the interface:
biz.papercut.pcng.ext.paymentgateway.ExternalCreditSourceProvider
4. Compile the class (and any other associated classes) and place in a JAR file.
5. Copy the JAR file to
C:\Program Files\PaperCut NG\server\lib-ext
6. Open the file:
C:\Program Files\PaperCut NG\server\lib-ext\ext-payment-gateway-external-credit-source.properties
in a text editor such as Notepad.
7. Locate the line `external-credit-source.enabled=N` and change the *N* to *Y* to enable the module.
8. Add a line:
`external-credit-source.source=`
to the file setting the full name of your class. E.g.:
`external-credit-source.source=com.myorganization.MyClass`
9. Configure other options in this file as discussed in *General Configuration Options* in the *Payment Gateway Module* documentation. Options include limits on the amount to transfer, access groups and custom error messages.
10. Save the file and exit Notepad.
11. Restart the Application Server. A new "Add Credit" link should appear in the web end-user web interface.
12. Log into the PaperCut NG end-user web interface as a test user at <http://papercutserver:9191/user>. A new link called *Add Credit* should appear. Click on this link and perform a test transaction.
13. Provide end-users with brief instructions on how to transfer credit using this interface. A note on the school noticeboard or intranet site should suffice.

2 Notes:

- Don't throw exceptions in the `withdrawCredit()` method
- If you need to maintain persistent data (e.g. persistent database connection or memory storage) use either singletons or private static class members.
- Your code should be threadsafe. If not, synchronize your `withdrawCredit()` method.
- Any JAR dependencies may also be placed in the `lib-ext` directory.

3 Example:

A basic example called `StudentLoanExternalCreditSource.java` is included in the location:

```
C:\Program Files\PaperCut NG\server\lib-ext\ext-payment-gateway-examples
```

This example simply writes the transactions to a plain tab-delimited text file for post processing.

Contact your reseller or Authorized Solution Center for assistance. You can find their contact information in your PaperCut Admin interface on the **About** page.