



Blackboard One-Card Configuration

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GoPrint Systems, Inc.

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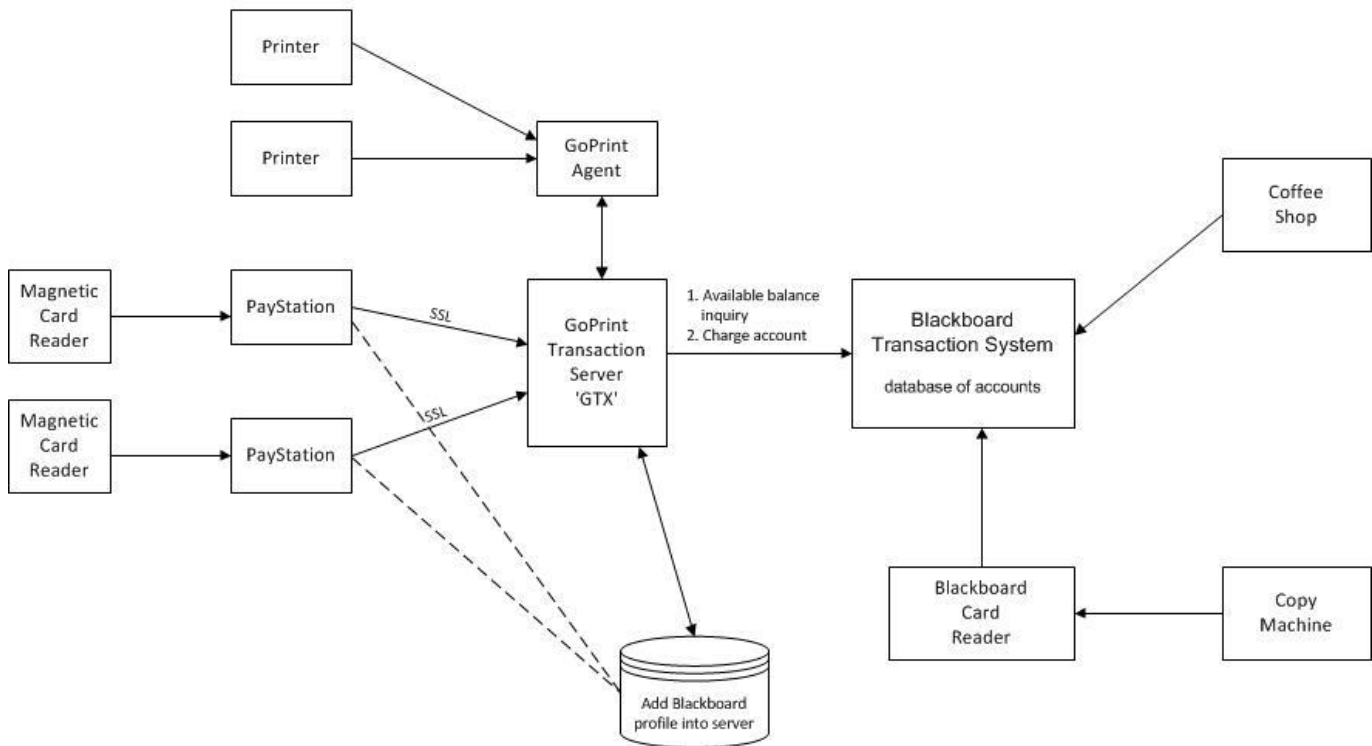
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Blackboard – GoPrint Integration

Overview

The GoPrint application can be configured to communicate directly with a Blackboard transaction server. This integration creates the ability to authenticate end-users against the Blackboard value card system.

Blackboard - Transaction System



Pre-installation Requirements

The process first involves gathering the required Blackboard vendor specific information:

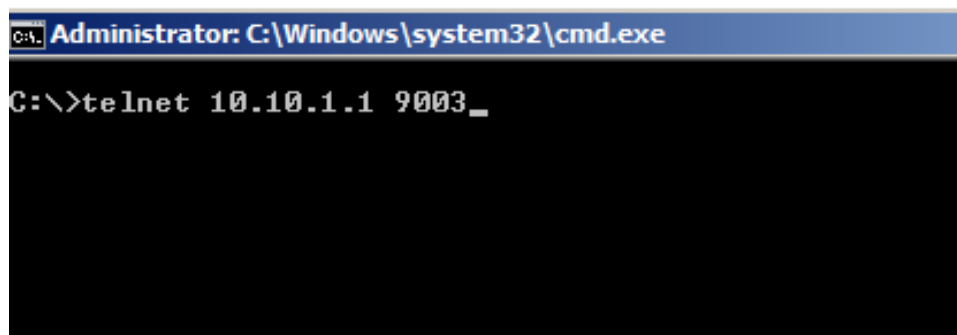
1. Transaction server IP address, hostname, or FQDN
2. Listening port number, the default is: **9003**
3. Encryption key
4. GoPrint Vender number: default is **2513**
5. Primary Tender number and name (usually the current campus tender)
6. Secondary Tender number and name (optional, if granting end-users an allowance for free prints)
7. UNIX or Windows TS Version

Pre-Configuration Steps

Ensure the transaction server allows incoming traffic over the listening port

The Blackboard transaction (and any firewall) must allow incoming traffic over the listening port from the GoPrint server.

To test, open a command prompt and conduct a Telnet session over the listening port.



```
Administrator: C:\Windows\system32\cmd.exe
C:\>telnet 10.10.1.1 9003_
```

Step 1 – Enabling the Blackboard Purse

From the GoPrint Control Center main screen, select: Accounts - Class Definitions and check the **Blackboard** Purse.

Change the Purse Name to one that can easily be identified by users.

Class Name

Pay Methods
Mark the Pay Methods that you want to allow for this class and assign names for the purses. The purse names will be shown to users when they are signed in and preparing to pay for print jobs.

Type	Purse Name	Credit Limit
<input checked="" type="checkbox"/> Blackboard	<input type="text" value="Blackboard"/>	---

Note: The Purse name is displayed at the Print Release Station and Web Client Popup next to the user's available balance. It's recommended to change the wording to an user-friendly name which can easily be identified by students.

Step 2 – Creating the Blackboard Payment Connector

Select Payments – Create a Payment Connector – Click Blackboard



Enter the following vendor specific information:

Home > Payment Connectors

Edit Blackboard Connector

Name	<input type="text" value="Student Prints"/>
Ref No	<input type="text"/>
	The external accounting reference number for transactions posted to this account.
Server	<input type="text" value="10.10.1.1"/>
Port	<input type="text" value="9003"/>
Encryption Key	<input type="text" value="DQFWFWEFDF"/>
Terminal No	<input type="text" value="1"/>
Vendor No	<input type="text" value="2513"/>
Blackboard Server Type	<input type="text" value="Windows"/>
Card Present Override	<input type="text" value="Use system logic"/>

- **Name:** label given to settings to identify this particular group
- **Server:** IP address or hostname of the Blackboard transaction server
- **Port:** The Port used by the Bb transaction server: Default port is 9003
- **Encryption Key:** 32 character password (AES encryption). A transaction may have no encryption or AES encryption. Error detection is either LRC or CRC error detection
- **Tender Number:** the client defines a default Tender number for each of the six transaction types or each terminal. The 3rd party system will normally use the "Tender number" of zero value which uses the transaction defaults. If a different debit account is needed, the 3rd party will use that account number as the "Tender number".
- **Vendor Number:** default vender number assigned to GoPrint is 2513
- **Blackboard Server Type:** Windows or UNIX
- **Card Present Override:** use Default System Logic
- **Primary Tender No:** Unique account number assigned by campus Blackboard administrator. Normally, the current campus one-card funds or a separate account assigned for printing only: example Free Prints.

- **Primary Tender Name:** Displayed on the Print Release Station quota user payment screen at time of payment.
- **Secondary Tender No. (optional)**
- **Secondary Tender Name: (optional)** Displayed on the PayStation quota user payment screen at time of payment.

The screenshot shows a configuration form with the following sections:

- Primary Tender:** No. Name
- Secondary Tender:** No. Name
- Currency:** To use a currency system select Use Currency. To use a Unit based Blackboard system, se
- Cash or Unit Based?:** Use Currency 1 Unit = \$
- Currency:**

- **Terminal Number:** A terminal number assigned and configured for tracking and reporting of transactions originating from the Vendor
- **Version Number:** Version 1 only supports Windows – balance inquiry only. Version 2 supports Unix - available and balance inquiries. Blackboard will assign a Protocol number.
- **Currency:** Alpha code from the EN24217 specification for currency. For example, 'USD' for dollars/cents.

The Terminal Number (above) and Primary Tender Number may be overridden on a per-PayPoint basis using the Tender Overrides feature on the PayPoint Properties screen's Financial tab.

Using the secondary tender feature below with a tender name provided for both Tenders will make the individual balances visible but not selectable to users. Both Tender names must be provided; otherwise users will only see the total.

The following displays an example of a Print Release Station screen displaying two Tenders. A Secondary Tender used for free prints and the Primary Tender used for standard campus funds.



Once the end-user exhausts their free prints funds, they are required to purchase additional print jobs using their primary tender funds.

If you want users to be able to see **and** control which funds they use, then do not use the secondary tender feature. Instead, enable a second Blackboard purse at the User Class level and create a second Blackboard Payment Connector for that secondary tender.

Step 3 – Assign the Blackboard Purse at a PayPoint

Return to the main GoPrint Admin screen and select the pencil icon next to the PayPoint configured during the GoPrint installation.

Select the Financial tab:

Default Properties

General | **Financial** | Prompts | Messages

ACL Permissions

Allowed Purses

When presented to end-users, purses are sorted by their Sort Order numeric value. Purses with the same sort values are sorted by the purse name.

Default User Class - Blackboard

Sort Order: 10

Payment Connector: Student Prints Terminal 1 Tender 1/2

Add Value Option: Not Allowed

Add Value Instructions: [Empty text area]

Partial Payment Option: Disallow

▼ Tender Overrides (authenticated users only)

gs4srv	Tender: []	Terminal: []
goprint	Tender: []	Terminal: []

Check the User Class associated with the Blackboard purse

Select the Blackboard Payment Connector from the drop down menu

Add Value Option: Select Not Allow

Add Value Instructions: Select Disallow

Tender Overrides

Tender Overrides provides the ability to segregate Blackboard transactions by physical location based on the location of each Print Release Station and card swipes conducted at that location.

This is preferred method to help record accurate transaction reports for departmental comparison and distribution.

To enable, an individual Terminal No must first be configured within Blackboard for each Print Release Station and then entered in the Terminal field corresponding to the desired Print Release Station and Tender.

The screenshot shows a configuration window titled "Tender Overrides (authenticated users only)". It contains two rows of configuration for different stations:

Station	Tender	Terminal
gs4srv	1	23
goprint	1	24

Step 4 – Configuring the Payment Station and Blackboard Card Readers

General Tab

1. Change the Mode from Release Mode to Payment Mode
2. Change the Authentication Type to NONE
3. Change Card Action Label wording to SWIPE

The screenshot shows the "General" configuration tab for a payment station. The configuration is as follows:

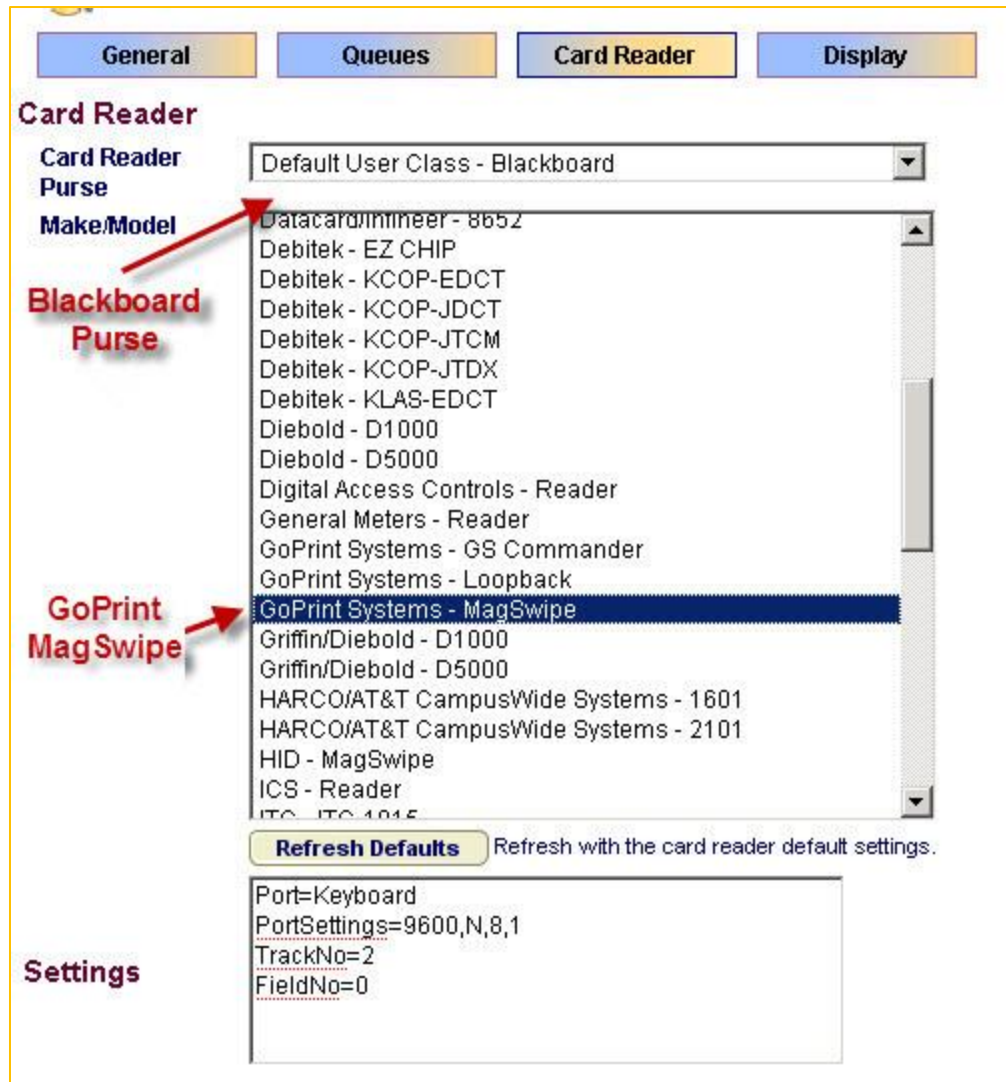
Field	Value
Station Name	gs4srv
PayPoint	Default
Copy Settings	[Icon]
Description	[Empty]
Branding	Golden Gate Bridge
Mode	PayStation
Initial View	User Names
Authentication Type	None
"Press" Caption	Touch
Card Action Label	SWIPE
Payment Type Label	Card
Job Selection Complete Button Label	Continue

Red arrows point to the following fields with labels:

- Mode: Pay Station Mode
- Authentication Type: None
- Card Action Label: Change text to say Swipe

Card Reader Configuration

Click the Card Reader button and scroll down the list to find your specific driver.



Choose [Select](#) to display the listing of various supported card reader vendors

Scroll down the listing to the GoPrint selection and click [GoPrint Systems/MagSwipe](#)

The appropriate Settings will automatically populate into the required fields.

TrackNo Hint: When testing, open Notepad and conduct a card swipe to capture track data.

If the results start with a Semi-colon then the card is programmed for Track 2

If the results start with a Question Mark then the card is programmed for Track 1

Your Blackboard configuration has been completed. Begin testing to ensure proper card capturing data.

Blackboard Transaction Integration Properties

Note: the Encryption Key

With the updated version of the Bb TS system, clients may conduct **Fund Mappings** using either the standard method by mapping individual Tenders, (example below) or elect to use an **AutoStored** mapping; which automatically maps each fund configured in the path.

Individual Tenders VS AutoStored

Tender	Fund Name	Default
1	PRINT MONEY	YES
2	CASH	

Tender	Meal Type	Default
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AutoStored option

The screenshot displays three overlapping windows from the Blackboard Transaction System:

- Blackboard Transaction System**: Shows the main menu with 'System', 'Activities', and 'Dining Services' tabs. The 'Dining Services' tab is active, showing fields for Merchant, Profit Center (GO PRINT), and Cashier (<NONE>).
- Dining Services POS Configuration**: Shows a dropdown for Profit Center (GO PRINT) and a tree view of POS components. Under 'Transaction Integration Agent', 'GO PRINT 1' and 'GO PRINT 2' are listed.
- Dining Services Transaction Integration Agent Properties**: Shows configuration for a specific agent. Fields include Terminal Number (1), POS Name (GO PRINT 1), Encryption Key (402a3f0c72da3e0c3cbd2dc5671), Vendor (GO PRINT), Cashier (EDWARDS(3)), and Tender Type for Payments (Cash 1). It features two tables: 'Funds Mapping' and 'Board Meal Types Mapping'.

Tender	Fund Name	Default
1	<Autostored Value>	YES

Tender	Meal Type	Default
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A red arrow points from the word 'Autostored' to the 'Default' column of the 'Funds Mapping' table, specifically to the 'YES' value.

Troubleshooting

Successful Blackboard card swipe and debt (as view from Paystation Remote log)

CARD SWIPE DETECTED

```
Thread:transerver.KeyboardWedgeHandler] Detected possible card swipe
'%B5108401193820008^DOE/JOHN
M^12071010000000248000000?;5108401193820008=120710100000248?+000001856?'
2014-09-10 10:09:52,460 DEBUG [Card Polling Thread:transerver.MagSwipeCardReader
]Parsed card swipe data '%B5108401193820008^DOE/JOHN
```

TRACK FORMATTING IS DEDECTED

```
M^12071010000000248000000?;5108401193820008=120710100000248?+000001856?' using
track 2 field 0 and found '5108401193820008=120710100000248'
```

SUCCESSFUL BALANCE IS RETURNED FROM BLACKBOARD

```
2014-09-10 10:09:52,520 DEBUG [AWT-EventQueue-0:views.QuotaAccountView
]Updating balance display: balance=$1.29, credit=$0.00
```

```
]Refreshing NameSelectionView due to event refreshData
```

```
2014-09-10 10:10:16,572 DEBUG [AWT-EventQueue-0:views.JobConfirmationView
]action: Confirm
```

AMOUNT TO BE DEDUCTED IS DISPLAYED AND SENT TO BLACKBOARD

```
:actions.PaymentAction ]Processing payment -- Account: C-8852
Card #: 5108401193820008=120710100000248 PayMethod: Blackboard Total $: 0.10
Userless: true
2014-09-10 10:10:17,402 INFO [AWT-EventQueue-0:actions.PaymentAction
]Payment result: Successful Payment Release count: 1
2014-09-10 10:10:17,422 DEBUG [AWT-EventQueue-0:views.QuotaAccountView
]Updating balance display: balance=$1.29, credit=$0.00
```

Successful Bb Transaction displayed in GTX Run Log

Connection Request is made

First TenderNo Request

```
blackboard.BlackboardConnection] Blackboard request/response:  
<blackboard-request terminalNo='51' tranNo='162505' tenderNo='62' vendorNo='2513'  
versionNo='2' accountId='6361380000102909' tranAmount='0.0' tranType='7'>  
  
<blackboard-response code='2' response-time-millis='0' messageType='7' seqNo='162505'  
text='Limit 0000.00'/>  
</blackboard-request>
```

Second TenderNo Request

```
23:blackboard.BlackboardConnection] Blackboard request/response:  
<blackboard-request terminalNo='51' tranNo='162506' tenderNo='1' vendorNo='2513'  
versionNo='2' accountId='6361380000102909' tranAmount='0.0' tranType='7'>  
  
<blackboard-response code='2' response-time-millis='0' messageType='7' seqNo='162506'  
text='Limit 0002.00'/>  
</blackboard-request>
```

First TenderNo Response

```
2010-09-22 08:50:54,979 INFO [WebServer-23:blackboard.BlackboardConnection]  
Blackboard request/response:  
<blackboard-request terminalNo='51' tranNo='162507' tenderNo='62' vendorNo='2513'  
versionNo='2' accountId='6361380000102909' tranAmount='0.0' tranType='7'>  
  
<blackboard-response code='2' response-time-millis='0' messageType='7' seqNo='162507'  
text='Limit 0000.00'/>  
</blackboard-request>
```

Second TenderNo Response

```
2010-09-22 08:50:54,979 INFO [WebServer-23:blackboard.BlackboardConnection]  
Blackboard request/response:  
<blackboard-request terminalNo='51' tranNo='162508' tenderNo='1' vendorNo='2513'  
versionNo='2' accountId='6361380000102909' tranAmount='0.0' tranType='7'>  
<blackboard-response code='2' response-time-millis='0' messageType='7' seqNo='162508'  
text='Limit 0002.00'/>  
</blackboard-request>
```

First TenderNo Balance Response

```
2010-09-22 08:50:54,979      INFO  [WebServer-23:blackboard.BlackboardConnection]
      Blackboard request/response:
<blackbd-request terminalNo='51' tranNo='162509' tenderNo='62' vendorNo='2513'
versionNo='2' accountId='6361380000102909' tranAmount='0.0' tranType='1'>
  <blackboard-response code='0' response-time-millis='0' messageType='1' seqNo='162509'
text='Valid, Balance .00'/>
</blackboard-request>
```

Second TenderNo Balance Response

```
2010-09-22 08:50:54,979      INFO  [WebServer-23:blackboard.BlackboardConnection]
      Blackboard request/response:
<blackboard-request terminalNo='51' tranNo='162510' tenderNo='1' vendorNo='2513'
versionNo='2' accountId='6361380000102909' tranAmount='1.4' tranType='1'>
  <blackboard-response code='0' response-time-millis='0' messageType='1' seqNo='162510'
text='Valid, Balance .60'/>
</blackboard-request>
```

Privilege Unassigned

The Bb Account has not been assigned access to the configured Tender assigned in GoPrint. Check with your Blackboard Administrator.

