



Netlink 7010 Copier Reader and GS-4 Quota Configuration

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Note: Prior to completing the following steps it is assumed the GS-4 quota system has been previously configured. For additional information refer to the LDAP and Quota configuration section found in the GS-4 User Guide.

Configuring the Netlink 7010 copier reader is consists of a two step process. First, configuring the system with the GS-4 software, and secondly, physically connecting the device to the copier and setting the programming levels.

Set-up requirements

To complete the process at the software end you will need:

1. The IP address assigned to the Netlink device
2. The unique Terminal ID

To complete the process at the hardware end:

1. The GoPrint server IP address
2. The copy price amounts – related to price set within the GS-4 pricesheet



Note: you must repeat these steps for each netlink terminal!

Step 1 – Click Add a Netlink Device

The screenshot shows the GoPrint Control Center web interface. The top navigation bar includes the GoPrint logo and 'Control Center' text. On the right, there are links for 'home', 'admin', and a clock showing '11:23'. A 'Return t' button is also visible. The main content area is titled 'University USA' and contains a tree view of 'Print Servers' and 'PayPoints'. Under 'PayPoints', there is a sub-section for 'main campus' containing 'Paystaton1'. At the bottom of the interface, there are three buttons: 'Add a PayPoint', 'Add a Web Client', and 'Add a NetLink Device'. A red arrow points from the 'Add a Web Client' button to the 'Add a NetLink Device' button.



Step 2 – Enter the required Account and Settings

Create a user-friendly ID name to help identify the device. A short name based on the physical location is the most effective

Associate a PayPoint

Settings

Enter terminal ID
Important each device must be configured with a unique ID and the ID entered here.

Enter device IP address

PayMethod

Select the required payment method used with your quota set-up.

Click: **Save**

Repeat for each device

Home > PayPoint

New NetLink Device Properties

Account

ID: Library First Floor

PayPoint: main campus

Ref No:

The accounting reference number for transactions as

Settings

Terminal ID: 001

IP Address: 10.10.1.11

Model: NetLink Terminal 7010

Encryption: AES2

PayMethod: None selected

Save

Important: this setting MUST match the setting at your User Class and PayMethod. If not, users will not be able to authenticate to their Quota account. Refer to the troubleshooting section for additional information.

Class Name: Default User Class

Pay Methods
Mark the Pay Methods that you want to allow for this class and

Type	Purse Name
<input checked="" type="checkbox"/> Quota	Quota
<input checked="" type="checkbox"/> Allowance	Allowance



Netlink 7010 Copier Card Reader Programmed Settings

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The following document provides configuration instructions to program a Netlink 7010 copy reader to communicate to a GoPrint GTX server. The goal, of which, is to allow end-users to pay for copies using quota funds generated from a GoPrint Quota account or 3rd party transaction system.

Prerequisites

You will need to provide the GoPrint server's IP address, Subnet Mask, and Default Gateway. Additionally, each unit will need an unique terminal ID number which you will need to supply when configuring the unit in the GS-4 Control Center Netlink terminal settings.

Please follow the instructions to ensure your readers are consistent throughout your environment. If additional settings are needed, see the official Netlink 7010 manual.



Note: Required settings are noted in **Red**

Step 1- LOGGING INTO COMMAND MODE

Confirmed Netlink Firmware version 4.0.29

With the unit powered on, you must enter the command mode login and password in order to enter command mode.

- 1. Enter Login: D951**
- 2. Press: enter**
- 3. Enter Password: 7010**

Navigating through the Selections

- <A>** Move selection "up" one level; used to move through menus and select options or settings.
- ** Moves the current selection "down" one level; used to move through menus and select options or settings.
- <ENT>** Chooses the current selection or option, used to move through menus and to save options or settings to memory
- <CLR>** Clears the current value or steps back one-menu item, used to move through menus and to clear values when setting options or settings.
- <C>** Used for Punctuation Entries, press for "Punctuation" characters, press again to advance character until the desired character is displayed then press <ENT>.
- <D>** Used for Punctuation Entries, press for "Punctuation" characters, press again to advance character until the desired character is displayed then press <ENT>.



Step 2 – TERMINAL SETUP

TERMINAL ID

Each card read must have it's own unique Terminal ID number. The ID will also be needed later while configuring the reader within the GoPrint application.

Enter the Unit ID number, using the keypad, in the format: ####<ENT>

Examples: 0001 or 0020

EVENT LOG – No need to change Leave default settings

SWIPE READER – No need to change. **(optional)** change if users are required to swipe a student card instead of typing in an accounted and password. Disabled by default.

BAR CODE READER - No need to change Leave default settings

OFFLINE MODE - No need to change Leave default settings

OFFLINE AUTHORIZATION TYPE - No need to change Leave default settings (positive account required or positive account plus pin required)

SET APPLICATION MODE - Change to **Multiplan Copier**

Note: you will not be able to connect to the server if the default is set!

SITE CODE - No need to change Leave default settings

TIME - No need to change Leave default settings

DATE - No need to change Leave default settings

MASTER PASSWORD - No need to change Leave default settings

REPORT PASSWORD - No need to change Leave default settings

ENABLE KEY BEEPS – **(Optional)** change if desired for quiet zones

The loud beeping sound is enabled by default, to Disable use the **B** key followed by <ENT> to Disable.

ENABLE KEYPAD ACCT - **Change**

Disabled by Default use the **B** key followed by <ENT> to Enable

Note: Enabling this setting prompts users to enter their account number

MASK ACCOUNT OPTION - No need to change, leave default settings

PIN PROMPT - **Change**

Disabled by default, use the **B** key followed by <ENT> to enable the setting so users are prompt to enter their goprint quota password.



Note: not to be enabled with 3rd party systems only capturing account numbers



STAFF OR STUDENT – Leave default setting of NONE
OFFLINE TIMEOUT - No need to change Leave default settings

OFFLINE LOG SETUP – Leave default settings

MENU 2: Serial Port 1 Setup – No need to change, leave default settings

MENU 3: Serial Port 2 Setup - No need to change, leave default settings

Step 3 – NETWORK SETUP

While in the Command Menu “Network Setup” the following options are accessed by using the **A** and **B** keys to scroll to the item, then the **ENT** key to select that item.

Use DHCP for IP? – (Optional) use DHCP or static
DHCP is enabled by default. Use the **B** key followed by **<ENT>**

Hint: if enabling DHCP you will need to reboot the device (unplug the power cord) in order for it to connect to the DHCP server and obtain an IP address. During the initial start-up, the device screen will display connecting and if it was successful in obtaining an IP address.

TERMINAL IP – (optional) – only used when using static
Enter the Terminal IP Address (address of this device) using the keypad, in the format: ### . ### . ### . ### . **<ENT>** The . (decimal) is entered with the **C** key.

Important: The unit IP address will need to be entered later at the GS-4 Netlink configuration page, so make note. .

Configuring Netlink to Communicate to the GoPrint Server

SERVER IP - Change
Enter the IP Address of the GoPrint GTX server
Enter the Server IP Address using the keypad, in the format: ### . ### . ### . ### . **<ENT>** The . (decimal) is entered with the **C** key.

GATEWAY IP - Change
Enter the Gateway IP Address using the keypad, in the format: ### . ### . ### . ### . **<ENT>** The . (decimal) is entered with the **C** key.

NETWORK - Change
Enter the Netmask Address using the keypad, in the format: ### . ### . ### . ### . **<ENT>** The . (decimal) is entered with the **C** key.

SERVER PROTOCOL - No need to change, leave default settings
Select ITC1 or ITC4 using the **A** or **B** key followed by **<ENT>** select the appropriate server protocol

ENCRYPTION TYPE FOR ITC - change to AES2 for ITC



ENABLE ENCRYPT 4 – leave default of disabled

ITC4 PORT # - No need to change, leave default settings. Default port is 01024

ITC4 ESCROW VALUE - **change to 0.0 - will result in server error message if default of some other dollar value is entered.**

Enter the desired Escrow Value for ITC1 protocol, using the keypad, in the format:
\$ ##.## <ENT>.

RECONNECT DELAY – leave default of 60 seconds

MAC ADDRESS – automatically populated – leave default

MENU 5: Meters and Log Management - No need to change, leave default settings

Step 5 – COPIER APPLICATION SETUP

SET COPY PRICE 1 – Change

Enter the desired Price to charge for copies made on price line 1, using the keypad, in the format: \$ ##.## <ENT>.

COPY PRICE 2 - No need to change, leave default settings

Enter the desired Price to charge for Copies made on price line 2, using the keypad, in the format: \$ ##.## <ENT>.

COPY PRICE 3 - No need to change, leave default settings

Enter the desired Price to charge for Copies made on price line 3, using the keypad, in the format: \$ ##.## <ENT>.

COPY PRICE 4 - No need to change, leave default settings

Enter the desired Price to charge for Copies made on price line 4, using the keypad, in the format: \$ ##.## <ENT>.

DISCOUNT1 % thru DISCOUNT4 % - No need to change

SET PULSE TIME - Change

The default setting is 0010 ms, it must be changed to 0050 ms

PULSE: The minimum amount of time (typically in milliseconds) that the terminal must be activated through its deduct circuit to consider a copy to have been made. This is settable on most controllers so as to match the characteristics of the device being controlled. When “ghost” deductions happen randomly, this setting can often be increased to ignore noise. When copies are not counted at all, the pulse may have to be lowered as the copier may be

supplying a very short signal. Most copiers provide a pulse of at least 50 milliseconds.

Set BLIND TIME - Change

The default setting is 0050 ms, it must be changed to 0500 ms



BLIND TIME: The time between deduct pulses that the controller ignores the deduct signal. This can be used to block out "relay bounce" from the copier or when the copier gives 2 or more pulses close together per page printed. Be careful that the blind time is not set too high as this would "ignore" the pulse from the next page. To test, run a 5-page job. If less than 5 pages deduct; DECREASE the blind time. If more than 5 pages deduct; INCREASE the blind time. This test should be repeated for all paper sizes available to ensure proper timing.

DELAY DISABLE TIME- No need to change, leave default settings
Enter the Delay Disable Time in seconds, using the keypad, in the format: #### <ENT>.

DELAY DISABLE: This is the time between pressing the clear button and the opening of the Enable relay. On some copiers, if the enable is opened mid-cycle, the paper will jam inside the copier.

DELAY COUNT TIME - No need to change, leave default settings
Enter the Delay Count Time in seconds, using the keypad, in the format: #### <ENT>.

DELAY COUNT - The time between the clear button being pressed and the return to standby mode. This should be set high enough so that the last copy is counted before the terminal returns standby. This can be determined by timing the print cycle from the press of the print button and the copy being displayed on the terminal then add .5 seconds.

SET AUTO END SESSION TIME - Change
This setting configures the amount of time the system will remain idle waiting before it defaults back to the login screen after a user completes a transaction.
This setting is set to 0000 by default and was changed to 0035 seconds

AUTO END SESSION - The time between the last count pulse received by the terminal and the time at which the terminal will automatically return to standby mode; disabling the copier. The Auto End countdown is reset each time a copy is made.

MENU 8: Set Limits - No need to change, leave default settings

MENU 10: Diagnostics - No need to change, leave default settings
At this time the Diagnostics routine is being developed for Production and Q-A use. The Diagnostics routine is not available to the end user.



Troubleshooting

The netlink interface offers limited error messaging. Commonly, a Transaction Rejected message is displayed at the user screen which can represent a wide variety of configuration errors. Therefore, to obtain specific error feedback it is necessary to review the GS-4 log file. The RUN.log can be found under the GS4\Logs directory and provides information on numerous communication messages.

SUCCESSFULTRANSCATION MESSAGES

SUCCESSFUL INTERNAL QUOTA USER AUTHENTICATION

```
15 14:18:55,89 DEBUG [NetLink@10.10.1.115:netlink.NetLinkMessageHandler ]
  Get Authorization (1I) request with data
'N,12345,0,0,2,20,15/10/2008,16:20:59,0,Y,6789'
INFO NetLink@10.10.1.115: authentication.AuthenticationManager]
  Authenticating user 12345 with internal authentication.
```

NEW QUOTA ACCOUNT CREATED VIA LDAP FROM CASH TO ACCOUNT CREATION

Account verified message with balance is displayed at the terminal

```
2008-10-15 15:36:31,531 DEBUG[NetLink@10.10.1.115:netlink.NetLinkMessageHandler
]<< NetLink Terminal 0001 at 10.10.1.115
  Get Authorization (1I) request with data
N,191122,0,0,2,22,15/10/2008,17:38:34,0,Y,12345'
[NetLink@10.10.1.115:authentication.AuthenticationManager]
  Authenticating user 191122 with internal authentication.
[NetLink@10.10.1.115:authentication.AuthenticationManager]
  Authenticating user 191122 via auth type: LDAP
2008-10-15 15:36:31,562 DEBUG[NetLink@10.10.1.115:ldap.LDAPConnector
LDAP Auth for CN=goprintldap,OU=ITS,DC=goprintcorp,DC=local
2008-10-15 15:36:31,578 DEBUG[NetLink@10.10.1.115:ldap.LDAPConnector ]
  LDAP Auth for CN=191122,CN=Users,DC=goprintcorp,DC=local
2008-10-15 15:36:31,640 INFO
[NetLink@10.10.1.115:authentication.AuthenticationManager]
Adding user 191122 to Default User Class based on external authentication source
2008-10-15 15:36:31,859 INFO [NetLink@10.10.1.115:databasebean.PurseBalanceDataBean
  Retrieving all balances for purse Netlink Quota
2008-10-15 15:36:31,937 DEBUG[NetLink@10.10.1.115:accounting.TransactionBuilder ]
  Recording 2 general ledger transactions with tranKey 145
2008-10-15 15:36:31,953 INFO
[NetLink@10.10.1.115:accounting.ScheduledQuotaManager]
  Reset/Accrue Quota For Purse 45 completed.
```




COMMON ERROR MESSAGES

When attempting a transaction you receive the following error messages at the Netlink device:

APP MODE NOT CORRECT - Application Mode needs to be set to Multiplan Copier

HOST IS OFFLINE OPERATION NOW ALLOWED – GoPrint Server IP address has not been entered is incorrect. navigate to Network ID settings and using the A and B buttons scroll to Server IP and change to the IP address of theGoPrint server.

SERVER TIMEOUT - The AES Encryption type Must be set to AES2 and must match at the GS-4 Control Center Netlink Terminal encryption drop down menu.

The screenshot shows the 'Netlink Properties' configuration window. It is divided into two sections: 'Account' and 'Settings'.
In the 'Account' section:
- ID: Netlink
- PayPoint: Netlink Test
- Ref No: (empty)
In the 'Settings' section:
- Terminal ID: 0001
- IP Address: 10.10.1.133
- Model: Netlink Terminal 7010
- Encryption: AES2 (highlighted with a red circle)
- PayMethod: (empty)
At the bottom, there are 'Save' and 'Delete' buttons.

ESCROW LIMITS TOO HIGH - if set higher than the quota account balance of remaining balance:

Negative Response for Get Authorization request with data '300, Account credit limit exceeded.

INCORRECT QUOTA PURSE SET AT NETLINK CONFIGURATION PROFILE

Application error for request from NetLink Terminal 0001 at 10.10.1.115

Account does not have access to the configured PayMethod Negative Response for Get Authorization request with data '301,User is not allowed to use this application'



SERVER PROTOCOL IS SET TO ITC2 INSTEAD OF ITC 1

2008-10-15 16:17:16,218 DEBUG[NetLink@10.10.1.16:netlink.NetLinkMessageHandler<<
NetLink Loader 0001 at 10.10.1.16 Get Balance (1K) request with data "191122", "", "", "", "", "12345", "0", "6" Authenticating user with internal authentication.
Invalid login for : for request from NetLink Loader 0001 at 10.10.1.16
NetLink Loader 0001 at 10.10.1.16 Negative Response for Get Balance request with data '201,Login not found

INVALID LOGIN AND PASSWORD – USER ACCOUNT DOES NOT EXIST

TRANSCATION REJECTED MESSAGE

2008-10-15 16:27:51,453 INFO
[NetLink@10.10.1.16:authentication.AuthenticationManager] **Authenticating user 5637 via auth type: LDAP**

2008-10-15 16:27:51,453 DEBUG[NetLink@10.10.1.16:ldap.LDAPConnector]
LDAP

(Found LDAP Search User) - Auth for CN=goprintldap,OU=ITS,DC=goprintcorp,DC=local

2008-10-15 16:27:51,484 INFO
[NetLink@10.10.1.16:authentication.AuthenticationManager]

(Did not find Student User via LDAP) Authentication exception - Failed to find user: 5637

Invalid login for 5637: for request from NetLink Loader 0001 at 10.10.1.16

2008-10-15 16:27:51,500 DEBUG[NetLink@10.10.1.16:netlink.NetLinkMessageHandler]
>> NetLink Loader 0001 at 10.10.1.16 **Negative Response for Get Balance request with data '201,Login not found'**

LOGIN EXISTS BUT INCORRECT PASSWORD ENTERED

TRANSCATION REJECTED MESSAGE.

2008-10-15 16:29:48,453 DEBUG[NetLink@10.10.1.16:ldap.LDAPConnector]
LDAP

Auth for CN=goprintldap,OU=ITS,DC=goprintcorp,DC=local

2008-10-15 16:29:48,468 DEBUG[NetLink@10.10.1.16:ldap.LDAPConnector]
LDAP

(Found User Account) Auth for CN=191122,CN=Users,DC=goprintcorp,DC=local
(BUT BAD PASSWORD IS ENTER)

authentication for CN=191122,CN=Users,DC=goprintcorp,DC=local failed: [LDAP: error code 49 - 80090308: LdapErr: DSID-0C090334, comment: AcceptSecurityContext error, data 52e, vece] 2008-10-15 16:29:48,484

Invalid login for 191122: for request from NetLink Loader 0001 at 10.10.1.16

2008-10-15 16:29:48,484 DEBUG[NetLink@10.10.1.16:netlink.NetLinkMessageHandler]
>> NetLink Loader 0001 at 10.10.1.16 **Negative Response for Get Balance request with data '201,Login not found'**