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Banner General Release Guide

Release 8.6.1
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Revision History

Publication Date	Summary
August 2013	New version that supports Banner General 8.6.1 software.

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Introduction

This release guide documents release 8.6.1 of Banner® General. Release 8.6.1 includes RPEs and problem resolutions since release 8.6.

International Bank Account Number (IBAN) RPEs

The International Bank Account Number (IBAN) is an international standard for identifying bank accounts and consists of up to 34 alphanumeric characters.

The following IBAN RPEs were addressed in this release:

- 1-10FXRY1
- 1-1F3QUJ7
- CMS-RPE20539

1-10FXRY1

To meet international banking requirements the field size for the Bank Account Number and Bank Routing number on the following forms has been increased.

Modified forms:

The following forms were modified:

- Direct Deposit Recipient (GXADIRD)
- Bank Code Rules (GXR BANK)
- Bank Routing Number Validation (GXVDIRD)

Direct Deposit Recipient (GXADIRD)

The field size on the following fields was increased:

- **Account Number** - increased from 17 to 34 characters
- **Bank Routing** - increased from 9 to 11 characters

Bank Code Rules (GXR BANK)

The field size on the following fields was increased:

- **Account Number** - increased from 17 to 34 characters
- **Bank Routing** - increased from 9 to 11 characters

Bank Routing Number Validation (GXVDIRD)

The field size on the following field was increased:

- **Bank Routing** - increased from 9 to 11 characters

Modified tables

The following tables were modified:

- GXRDIRD
- GXVBANK
- GXVDIRD

GXRDIRD

The following GXRDIRD table rows were modified:

- GXRDIRD_BANK_ACCT_NUM - increased from 17 to 34 characters
- GXRDIRD_BANK_ROUT_NUM - increased from 9 to 11 characters

GXVBANK

The following GXVBANK table rows were modified:

- GXVBANK_ACCT_NUM - increased from 17 to 34 characters
- GXVBANK_BANK_ROUT_NUM - increased from 9 to 11 characters

GXVDIRD

The following GXVDIRD table rows were modified:

- GXVDIRD_CODE_BANK_ROUT_NUM - increased from 9 to 11 characters

New GTVSDAX rules

The following GTVSDAX rules are new with Banner General 8.6.1:

- BANK_ACCT
- BANK_ROUT

BANK_ACCT

Use this concept to define the rules for the validation of bank account numbers as they are entered on various forms such as GXADIRD (Direct Deposit Recipient) and GXR BANK (Bank Code Rules). In addition, if Payroll is installed, PHAADJT (Adjustment Processing) and PEA1PAY (One-Time Payment).

The rules are defined under Group=IBAN, Internal Code=BANK_ACCT, Sequence=1. The External Code may have one of the following values:

- 0 Do not validate - the forms will be limited to the size of the data base field, but no other editing will be performed
- 1 If ANY alpha characters exist then generate a WARNING if IBAN MOD 97 validation fails (allows a mix of IBAN and non-IBAN accounts)
- 2 If ANY alpha characters exist then generate an ERROR if IBAN MOD 97 validation fails (allows a mix of IBAN and non-IBAN accounts)
- 3 Force validation on all accounts and generate an ERROR if IBAN MOD 97 validation fails
- Xnn Generate an ERROR if the account number exceeds nn characters in length (Default value is X17)
- Nnn Generate an ERROR if the account number exceeds nn in length or if there are any non-numeric characters

See also Group=IBAN, Internal Code=BANK_ROUT, Sequence=1 for validation on the Bank Routing Number / BIC.



Note: The bank account database field is defined as 34. If the external code entered exceeds 34, (i.e., X50) the bank account entered on a form where this edit is called cannot exceed 34.



Note: If the GTVSDAX entry is missing or invalid (i.e. not one of the values above), the external code will default to X17.



Note: If Payroll has been installed but the 8.10 Payroll upgrade for IBAN support has not, then regardless of the rule the maximum length allowed



Note: If your institution is in either the United States [as defined by STVNATN_SSA_REPORTING_EQUIV="US" for the GUBINST_NATN_CODE] or Canada [as defined by NTRINST_LOCATION_IND="C" if present], then regardless of the rule the maximum length allowed will be 17.

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The IBAN validation refers to the validation of the International Bank Account Number (IBAN). The IBAN format allows up to 34 characters and will vary by country. The IBAN consists of up to 34 alphanumeric characters: first the two-letter ISO 3166-1 alpha-2 country code, then two check digits, and finally a country-specific Basic Bank Account Number (BBAN). Permitted IBAN characters are the digits 0 to 9 and the 26 upper case Latin alphabetic characters A to Z. This applies even in countries (e.g., Israel) where these characters are not used in the national language. See also: http://en.wikipedia.org/wiki/International_Bank_Account_Number

An IBAN is validated by converting it into an integer and performing a basic mod-97 operation (as described in ISO 7064) on it. If the IBAN is valid, the remainder equals 1. The algorithm of IBAN validation is as follows:

1. Check that the total IBAN length is correct as per the country. If not, the IBAN is invalid. (Banner does NOT validate the length per country)
2. Move the four initial characters to the end of the string.
3. Replace each letter in the string with two digits, thereby expanding the string, where A = 10, B = 11, ..., Z = 35.
4. Interpret the string as a decimal integer and compute the remainder of that number on division by 97.

If the remainder is 1, the check digit test is passed and the IBAN might be valid.

Example (fictitious United Kingdom bank, sort code 12-34-56, account number 98765432):

IBAN: GB82 WEST 1234 5698 7654 32

Rearrange: W E S T12345698765432 G B82

Convert to integer: 3214282912345698765432161182

Compute remainder: $3214282912345698765432161182 \bmod 97 = 1$

BANK_ROUT

Use this concept to define the rules for the validation of bank routing numbers as they are entered on various forms such as GXADIRD (Direct Deposit Recipient), GXR BANK (Bank Code Rules), and GXVDIRD (Bank Routing Number Validation).

The rules are defined under Group=IBAN, Internal Code=BANK_ROUT, Sequence=1. The External Code may have one of the following values:

- 0 Do not validate - the forms will be limited to the size of the data base field, but no other editing will be performed
- 1 If ANY alpha characters exist then generate WARNING if BIC validation fails (allows a mix of IBAN and non-IBAN bank numbers)
- 2 If ANY alpha characters exist then generate ERROR if BIC validation fails (allows a mix of IBAN and non-IBAN bank numbers)
- 3 Force validation on all bank numbers and generate an ERROR if BIC validation fails

- Xnn Generate an ERROR if the bank number exceeds nn characters in length
- Nnn Generate an ERROR if the account number exceeds nn in length or if there are any non-numeric characters (Default value is N09).

See also Group=IBAN, Internal Code=BANK_ACCT, Sequence=1 for validation on the Account Number.



Note: The bank code database field is defined as 11. If the external code entered exceeds 11, (i.e., X50) the bank code entered on a form where this edit is called cannot exceed 11.



Note: If the GTVSDAX entry is missing or invalid (i.e. not one of the values above), the external code will default to N09.



Note: If Payroll has been installed but the 8.10 Payroll upgrade for IBAN support has not, then regardless of the rule the maximum length allowed will be 9.



Note: If your institution is in either the United States [as defined by STVNATN_SSA_REPORTING_EQUIV="US" for the GUBINST_NATN_CODE] or Canada [as defined by NTRINST_LOCATION_IND="C" if present], then regardless of the rule the maximum length allowed will be 9.

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BIC Validation is used for the international definition of bank codes. The Bank Swift Code is also referred to as the BIC code. It is a unique code used to represent financial and non-financial institutions. The US will still continue to use the 9 digit (i.e. 0-9) values for the bank routing code.

The bank swift code consists of 8 or 11 characters.

- The first 4 positions refer to an alphabetic (i.e. A-Z) representation of a bank code [i.e. DEUT for the Deutsche Bank]
- The next two 2 letters (i.e. A-Z) represent the ISO 3166-1 country code [i.e. DE for Germany]. Banner does NOT verify the ISO 3166-1 values, only that they are A-Z.
- The next two characters (i.e. 0-9, A-Z) represent the location of the financial institution [i.e. BB for Berlin]
- The last three characters (i.e. 0-9, A-Z) are an optional Branch Code [i.e. 101 for Berlin II).

The full bank routing number in the above case would be DEUTDEBB101.

New functions

The following functions are new with Banner General 8.6.1:

- goksels.f_iban_installed
- goksels.f_validate_bank_acct_num
- goksels.f_validate_bank_rout_num

Modified objects

The following objects were modified with Banner General 8.6.1:

- ggtvsdax_080601.sql
- goksel1.sql
- goksels.sql
- gos_audit_seq.sql
- gutdrdh0.sql
- gxrdir_080601_01.sql
- gxvbank_080601_01.sql
- gxvdir_080601_01.sql

1-1F3QUJ7

The following form is new for this RPE:

Direct Deposit History (GXIDRDH)

The following table is new for this RPE:

Direct Deposit History (GXRDRDH)

New form

Direct Deposit History (GXIDRDH)

The Direct Deposit History (GXIDRDH) form records the history of when a user modifies direct deposit records on the Direct Deposit Recipient (GXADIRD) form.

Field	Description
ID	Identification number of the recipient (employee, student, or vendor) that receives payments via direct deposit. List: Person Search Form (SOAIDEN) Count Hits: Non-Person Search Form (SOACOMP)
Audit Time	Date and time that the action was performed on GXADIRD.
Action	Action performed on GXADIRD. I: A new record was inserted on GXADIRD. U: An existing record was updated on GXADIRD. D: An existing record was deleted on GXADIRD.
User	Username that performed the action on GXADIRD.
Bank Routing	Routing number for the recipient's bank.
Account Number	Recipient's bank account that receives disbursements via direct deposit.
A/P	Check box that indicates whether the recipient is eligible for accounts payable disbursements.
Payroll	Check box that indicates whether the recipient is eligible for payroll disbursements.
IAT	Check box that determines whether ACH direct deposits to this bank account require the IAT format. Turns the IAT format on or off. <i>selected:</i> ACH direct deposits use the IAT format. <i>cleared:</i> ACH direct deposits do not use the IAT format.
Bank Routing	Routing number for the recipient's bank.
User	Username that performed the action on GXADIRD.
Activity Date	Date that the action was performed on GXADIRD.
Vendor Address Type	Address type associated with the bank account.
Address Sequence	Sequence number associated with the address type.

Field	Description
Accounts Payable	Check box that indicates whether the recipient is eligible for accounts payable disbursements.
Payroll	Check box that indicates whether the recipient is eligible for payroll disbursements.
Account Number	Recipient's bank account that receives disbursements via direct deposit.
Checking Savings	Type of bank account that receives disbursements via direct deposit (<i>Checking</i> or <i>Savings</i>).
Direct Deposit Status	Recipient's direct deposit status: <i>Active</i> : Payments are received through direct deposit. <i>Prenote</i> : A prenotification or test record is created. Actual payments are made through regular check processing. <i>Inactive</i> : No direct deposit payments are made. Payments are made through regular check processing.
Priority	User-defined priority code for the sequence in which processing and disbursements occur. Items with a priority of 1 process before those with a priority of 2.
Amount or Percent	Amount or percentage to be deposited in the bank.
IAT	Check box that determines whether ACH direct deposits to this bank account require the IAT format. Turns the IAT format on or off. <i>selected</i> ACH direct deposits use the IAT format. The ISO <i>cleared</i> ACH direct deposits do not use the IAT format.
ISO Country Code	Country code of the destination country for IATs sent to this bank account.
ACH Transaction Type	Default ACH transaction type used with Accounts Payable reimbursements to this bank account.
IAT Address Type Override	Address type that overrides the default address type defined on the Crosswalk Validation Form (GTVSDAX).
IAT Address Sequence	Sequence number used with the IAT address type override code for Accounts Payable IATs. For Accounts Payable reimbursements, a vendor ID can have multiple addresses with the same address type. This sequence number is used with the address type to retrieve the specific destination address of IATs sent to this bank account.

New table

Direct Deposit History (GXRDRDH)

The Direct Deposit History (GXRDRDH) table stores the history of when a user modifies direct deposit records on the Direct Deposit Recipient (GXADIRD) form.

The following columns are in this table:

GXRDRDH_AUDIT_TIME	TIMESTAMP	NOT NULL
GXRDRDH_AUDIT_ACTION	VARCHAR2(01)	NOT NULL
GXRDRDH_PIDM	NUMBER(08)	NOT NULL
GXRDRDH_STATUS	VARCHAR2(01)	NOT NULL
GXRDRDH_DOC_TYPE	VARCHAR2(01)	NOT NULL
GXRDRDH_PRIORITY	NUMBER(02)	NOT NULL
GXRDRDH_AP_IND	VARCHAR2(01)	NOT NULL
GXRDRDH_HR_IND	VARCHAR2(01)	NOT NULL
GXRDRDH_ACTIVITY_DATE	DATE	NOT NULL
GXRDRDH_USER_ID	VARCHAR2(30)	NOT NULL
GXRDRDH_BANK_ACCT_NUM	VARCHAR2(34)	
GXRDRDH_BANK_ROUT_NUM	VARCHAR2(11)	
GXRDRDH_AMOUNT	NUMBER(17,2)	
GXRDRDH_PERCENT	NUMBER(5,2)	
GXRDRDH_ACCT_TYPE	VARCHAR2(01)	
GXRDRDH_ATYP_CODE	VARCHAR2(02)	
GXRDRDH_ADDR_SEQNO	NUMBER(02)	
GXRDRDH_ACH_IAT_IND	VARCHAR2(01)	
GXRDRDH_SCOD_CODE_ISO	VARCHAR2(03)	
GXRDRDH_ACHT_CODE	VARCHAR2(08)	
GXRDRDH_ATYP_CODE_IAT	VARCHAR2(02)	
GXRDRDH_ADDR_SEQNO_IAT	NUMBER(2,0)	
GXRDRDH_SURROGATE_ID	NUMBER(19)	NULL
GXRDRDH_VERSION	NUMBER(19)	NULL
GXRDRDH_DATA_ORIGIN	VARCHAR2(30)	NULL

GXRDRDH_VPDI_CODE VARCHAR2 (6) NULL

CMS-RPE20539

A new field has been added to the Direct Deposit Recipient (GXADIRD) form.

The **user** field has been added to the Direct Deposit Recipient (GXADIRD) form. This field displays the user that modified the direct deposit recipient record.

Modified form

Direct Deposit Recipient (GXADIRD)

Direct Deposit Recipient (GXADIRD)

The **user** field has been added to the Direct Deposit Recipient (GXADIRD) form. This field displays the user that modified the direct deposit recipient record.

Field	Description
User	User that modified the direct deposit recipient record.

Debugging RPE

The following debugging RPE was addressed in this release:

- 1-1FP5ZK5

1-1FP5ZK5

A new procedure, p_ban_debug was created to allow you to capture debug information, via an autonomous transaction, to GURDBUG. You have the optional ability to dbms_output, http, or e-mail the results.

New object

The following object is new to Banner General 8.6.1.

p_ban_debug

```
PROCEDURE P_BAN_DEBUG(P_PARM IN VARCHAR2 DEFAULT NULL,  
                      P_TEXT IN VARCHAR2 DEFAULT NULL,  
                      P_SIZE IN INTEGER DEFAULT 250,  
                      P_USER IN VARCHAR2 DEFAULT USER,  
                      P_HTP IN VARCHAR2 DEFAULT 'N',  
                      P_DBMS IN VARCHAR2 DEFAULT 'N',  
                      P_CLOB IN CLOB DEFAULT NULL,  
                      P_MAIL IN VARCHAR2 DEFAULT NULL)
```

A typical statement added to existing PL/SQL code could be:

```
p_ban_debug('test','PIDM='||lv_pidm||' step=calc amt');
```

And the resulting output would be:

```
10-MAR-13 12.28.12.100822000 PM 1-test PIDM=67383 step=calc amt BANINST1
```

Each row is time-stamped providing the order in which the statements were executed and the information was saved.

For more information on p_ban_debug, please see the *Troubleshooting* section in the Banner General 8.6.1 Technical Reference Manual.

Problem Resolutions

The Banner General 8.6.1 Problem Resolutions document is a companion to this release guide. The resolution document provides summary information about the change requests that are resolved in Banner General 8.6.1. For additional details about specific change requests, go to <http://www.ellucian.com/Solutions/Ellucian-Client-Support/> and use the Ellucian Hub to access the Ellucian Support Center.