Welcome to
BOAS Administration and Technical Guide

BOAS Administration and Technical Guide has been updated. This version incorporates changes for BOAS Releases 8.0 and 8.2.

The *BOAS Administration and Technical Guide* is part of a documentation set. The other manuals include:

- *Using BOAS With the Single Message System*
- *Using BOAS With the BASE II System*

This book replaces the previous version of *BOAS Administration and Technical Guide* (0527-06). Please discard the old manual.

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Your opinion is important to us. If you have any comments regarding this manual, please e-mail us at any time. Our e-mail address is buspubs@visa.com.

Effective: 13 October 2000

Administration and Technical Guide

BackOffice Adjustment System

Effective: 13 October 2000

0527-08

Printed on recycled paper

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About This Guide

The *BOAS Administration and Technical Guide* is intended for system administration personnel who are responsible for:

- Installing the BackOffice Adjustment System (BOAS) software.
- Checking operator and transaction activity.
- Maintaining operator IDs.
- Establishing and maintaining BOAS transaction processing defaults.
- Importing and exporting transaction data to and from another system.

Instructions for completing these tasks are included in the following chapters:

- **Chapter 1, Installing BOAS**—discusses the hardware, software, and network requirements needed for installation and provides installation procedures.
- **Chapter 2, Reviewing System Activity**—describes how to track operator and transaction activity and print activity reports.
- **Chapter 3, Maintaining Operator IDs**—explains how to add, search for, and delete operator IDs.
- **Chapter 4, Setting Up Your System Profile**—describes how to set defaults for your transaction processing environment.

- **Chapter 5, Processing Import Files**—defines header and record data, field tags and descriptions, and transaction type data for importing BASE II and VisaNet Integrated Payment (V.I.P.) System transactions.
- **Chapter 6, Processing Export Files**—defines header and record data, field tags and descriptions, and transaction type data for exporting BASE II and VisaNet Integrated Payment (V.I.P.) System transactions.

A glossary is provided at the end of this guide.

Refer to the *Using BOAS With the BASE II System* or *Using BOAS With the Single Message System* user guides for an overview of the BOAS system, information on how to get started with BOAS, a listing of BOAS system messages, and sample BOAS reports.

Text Conventions Used in This Guide

This guide uses typefaces, symbols, and other devices to represent the information you see on BOAS screens, including the commands or information you type and the keyboard keys that you use. Table 1 shows the document conventions used in this guide.

Table 1: Document Conventions (1 of 2)

Document Convention	Purpose in this Guide
ALL UPPERCASE LETTERS	Drive letters, subdirectory names, and file names; system statuses, modes, and states
➤	Indicates step-by-step procedures
boldface	Command buttons (**OK**, **Cancel**), menu names, menu choices referenced in procedures, and keyboard keys referenced in graphics
 Caution	Information that may affect the system or your methodology

Table 1: Document Conventions (2 of 2)

Document Convention	Purpose in this Guide
`Courier` typeface	Entries typed at the keyboard, messages displayed by the system, and the typeface used to re-create screen captures and sample report layouts in text
EXAMPLE	Identifies an example of what the accompanying text describes or explains
IMPORTANT	Highlights important information in the text
italics	Document titles; emphasis
“material in quote marks”	Section names referenced in a chapter
Note:	Provides more information about the preceding topic
<Numbers in angle brackets>	Indicates the corresponding numbered flag that is illustrated in an accompanying figure
Research Original	The location of the highlight bar on a BOAS screen is circled

Page Layout Conventions

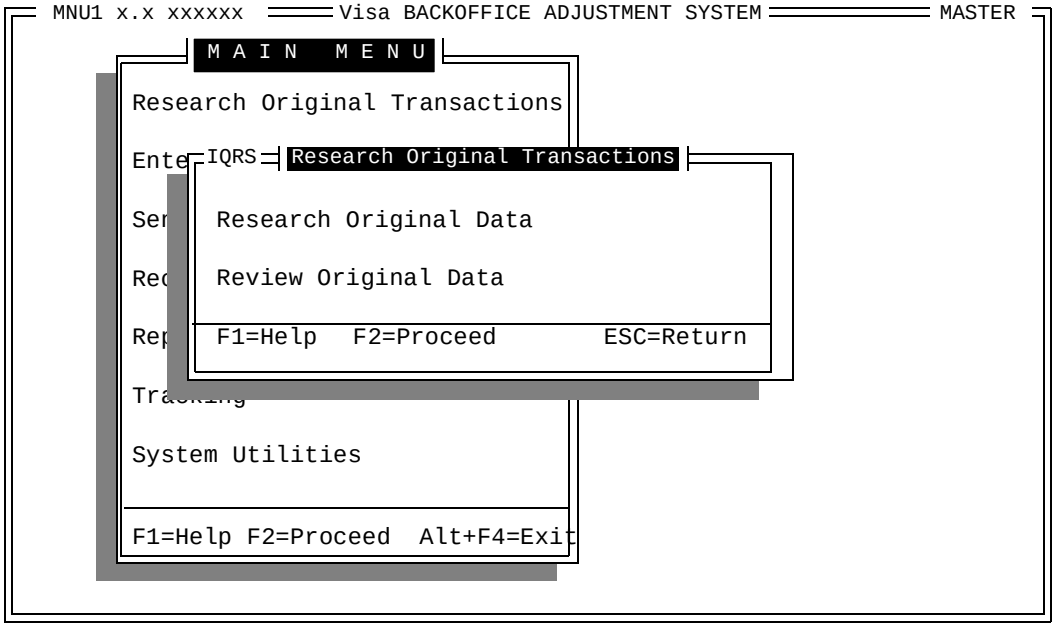
The pages in this user's guide that contain only header and footer information and no body text are intentional. They create a mirrored effect, with the procedure on the left page and the associated screen sample on the right page.

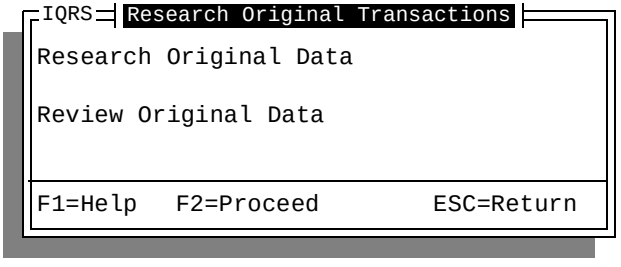
Screen Representations Used in This Guide

The BOAS screen illustrations in this guide have been created to resemble as closely as possible the screens you see on your PC terminal .

While using BOAS, some menu screens appear as overlays or appear on top of screens. For example, the Research Original Transactions menu overlays the Main Menu, as shown in Figure 1. For the sake of clarity, this guide may sometimes show these overlay screens as single screens. See the example in the lower portion of Figure 1.

Figure 1: Examples of Screen Representations—Double and Single Screens





Related Publications

For additional information about the Single Message System, refer to the following publications:

- *Using BOAS With the Single Message System*
- *VAP Operator's Guide*
- *V.I.P. System Overview*
- *V.I.P. System Reports*
- *V.I.P. System SingleConnect Service Interlink Processing Specifications*
- *V.I.P. System SingleConnect Service SMS ATM Processing Specifications*
- *V.I.P. System SingleConnect Service SMS POS (Visa & Visa Electron) Processing Specifications*
- *V.I.P. System SMS Processing Specifications (U.S.)*
- *V.I.P. System SingleConnect Service Interlink Reference Guide Technical Specifications*
- *V.I.P. System Interlink Technical Specifications*
- *V.I.P. System SingleConnect Service SMS ATM Technical Specifications*
- *V.I.P. System SMS ATM Technical Specifications (U.S.)*
- *V.I.P. System SingleConnect Service POS (Visa & Visa Electron) Technical Specifications*
- *V.I.P. System SMS POS (Visa & Visa Electron) Technical Specifications (U.S.)*

For additional information about BASE II, refer to the following publications:

- *Using BOAS With the BASE II System*
- *BASE II Clearing & Settlement Data Codes*
- *BASE II Clearing & Settlement Interchange Formats, TC 01 to TC 48*
- *BASE II Clearing & Settlement Interchange Formats, TC 50 to TC 92*

Installing BOAS 1

Hardware Requirements

The requirements below are the *minimum* needed to operate BOAS:

- An IBM-compatible PC with a 386 (or later) processor running HIMEM.SYS and EMM386.EXE
- 4 MB memory (including 430K available DOS memory)
- A hard diskette drive with a minimum of 40 MB available disk space
- One high-density diskette drive that can accommodate a 1.44 MB, 3.5-inch diskette
- A video monitor (color highly recommended)
- A keyboard
- A printer capable of printing 132 columns across the page
- Year 2000-compliant PC

Operating System Requirements

BOAS operates under DOS Releases 5.0, 6.0, 6.2, or 7.0. If you are running DOS Release 4.0, please contact Visa (at 1-800-VISANET in the U.S.) before attempting installation.

Caution

BOAS does not run in a Windows environment. Windows can be installed on your machine; however, it should not be running at the same time as BOAS.

BASE II Communication Requirements

Users who connect to VisaNet only through the BASE II System do not require modems or any additional telephone lines to use BOAS. However, to use the BOAS Original Inquiry function, BASE II users must obtain a V.I.P. connection.

V.I.P. System Communication Requirements

Users who connect to VisaNet through the V.I.P. System must use a modem supported by BOAS. BOAS supports many modem types. The list of compatible modems changes with each BOAS release. To see if you are using a compatible modem, search the .mdm files listed in the BOAS directory.

If you find the filename for your modem, enter it in the Network Profile screen. (See "Updating the Network Profile" in Chapter 4, Setting Up Your System Profile).

If you cannot find your modem's filename, call Visa to verify modem compatibility.

Modem Requirements

At a minimum, your modem should:

- Disable any error correction or data compression features.
- Automatically detect the baud rate.
- Have disabled flow control and auto-retrain.
- Return numeric result codes.
- Reflect the state of the connection: the DSR (data set ready) light must be *on* while there is a usable connection and must be *off* if the connection fails.

Using High-Speed Modems

BOAS sets the modem baud rate at 2400. You may be able to take advantage of a higher speed baud rate (up to 14,400 baud) if you are using:

- One of the Visa BOAS Gateway VAPs or Release 10.21 of the VAP software with the appropriate level of software. (Contact Visa to determine if your VAP has the appropriate level of software.)
- A filename for your modem that contains an "–HS" (high speed) extension in positions 6 through 8.

To find the modem filename, search the .mdm files in the BOAS directory. If you find a filename to match your modem, enter the filename for the higher speed modem in the Network Profile screen (see "Updating the Network Profile" in Chapter 4, Setting Up Your System Profile).

Telephone Lines

The telephone lines used for BOAS communication with the VAP must be suitable for modem information transfer and must include:

- A telephone connection at the BOAS PC site for dialing the VAP.
- A telephone connection at the VAP site for dialing the BOAS PC.

Additionally, V.I.P./VAP connections must be configured properly for running BOAS installation instructions. Refer to the last section of this chapter, "VAP BTS Security Table."

Network Considerations

When BOAS is installed on a LAN, there are special situations that must be accommodated.

There are common files that must be shared between workstations. When two or more users attempt to access the same file, the system queues the users. One user will be able to access the file; the others receive a message on their screen stating that the file is temporarily unavailable and gives them the option of waiting for the file or trying again at a later time.

There are some system functions that, when in progress, restrict workstation activity. For example, while the Operator ID file is accessed for maintenance, BOAS will not permit users to sign on.

Since the usual activities of a BOAS user are to create files, modify files, or both, the LAN Access Rights for the BOAS user must be set to provide the required privileges.

Other Software on the BOAS PC

Caution

BOAS does not run in a Windows environment. Windows can be installed on your PC; however, it should not be running at the same time as BOAS.

Software cache products hold files in memory rather than constantly returning operation to the disk. This design is incompatible with BOAS operation. These products must be either removed from the system or deactivated before running BOAS.

Note: *BOAS users may connect to VAPs maintained by Visa on Visa premises. Contact your Visa Representative for more information.*

Installing BOAS

Use the following procedure to install BOAS:

1. Review the operational requirements listed previously.
2. Make sure all hardware, software, and modem requirements are met. Make sure there is enough disk space available on your hard drive to accommodate both the BOAS system and its associated data.
3. Read the installation cover letter and confirm that you have all the necessary materials to complete the installation.
4. Create backup copies of the installation diskettes.
5. Insert the BOAS installation diskette into the diskette drive.
6. Set your system's default drive to the 3.5-inch diskette drive by typing either **`A:`** or **`B:`**.

   The system displays either the **`A:\>`** or **`B:\>`** prompt.
7. Type **`INSTALL`** and press **`Enter`**.

The system loads the software in the background while displaying information about the system. Once the system is loaded, BOAS is automatically initialized.

See *Using BOAS With the Single Message System* and *Using BOAS With the BASE II System* for information on logging on and moving around the system.

Converting From Prior Releases

Because of the changes in BOAS since the previous release, you must run a conversion program (CNVTBOAS) to restructure the files.

After you have performed any pre-production check-out procedures for a new release, you must execute the conversion program by typing **CNVTBOAS** at the DOS prompt from the new release's directory.


Caution

The conversion program provided with each BOAS release is based on the previous release. Therefore, you must install each release in sequential order and run the CNVTBOAS conversion program each time you install.

VAP BTS Security Table

The BackOffice Terminal System (BTS) is VAP software that permits authorized communication between the VAP and the BOAS PC for V.I.P. connectivity.

Note: *The VAP BTS Security Table must be updated with the current BOAS PC information before connection to the V.I.P. System can be initiated.*

For VAP Releases 10.1 and higher, refer to the *VAP Operator's Guide*, Chapter 16, VAP Utilities, "BTS Security Table."

Reviewing System Activity 2

Overview

This chapter explains how to review all system activity recorded by BOAS. The information can be used to audit, troubleshoot, and develop operator and transaction processing statistics.

The System Utilities function allows you to review system activity, manage operator IDs, set up your system profile, and import exception transactions into BOAS.

Subsequent chapters discuss the remaining system utility functions:

- Maintaining operator IDs
- Setting up your system profile
- Processing import files

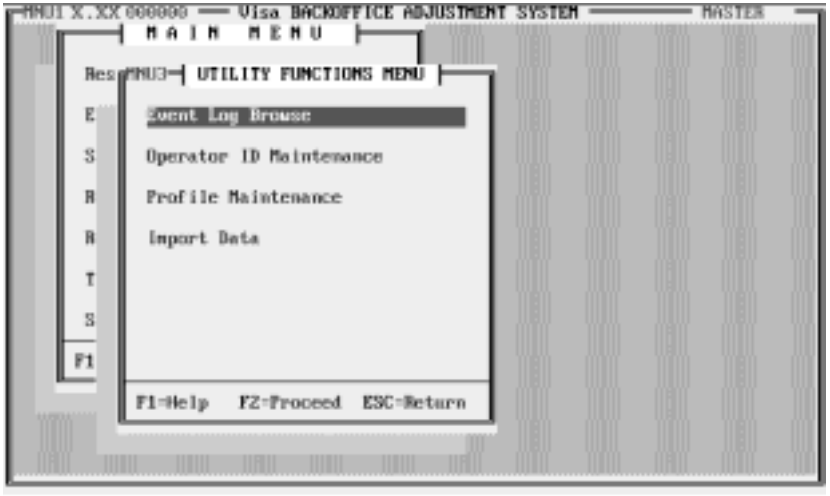
Viewing the Event Log

The Event Log tracks the activity of all users of the system. It can be used for troubleshooting, developing operator statistics, or providing data for internal audits.

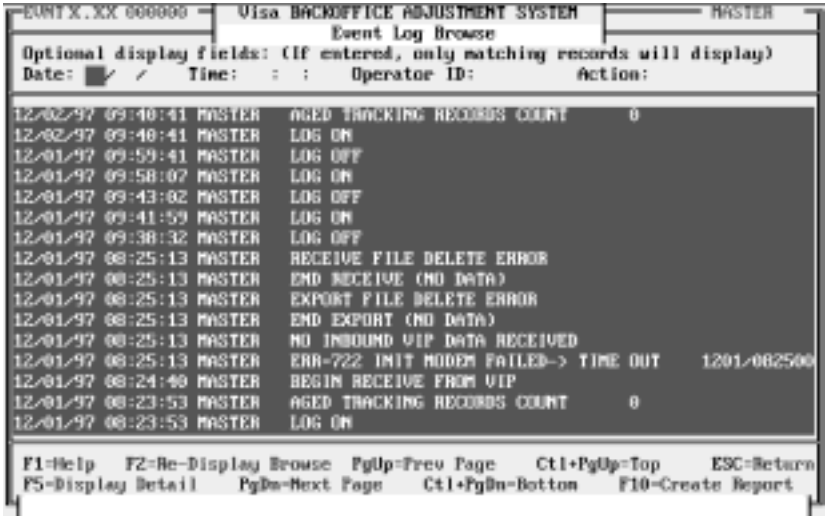
You can access the Event Log from the Event Log Browse screen. From there, you can scroll through the entire log or display a detailed record for an individual log entry.

➤ **To view the event log:**

1. At the Main Menu, highlight **System Utilities** and press **F2**.
2. At the Utility Functions Menu, highlight the Event Log Browse menu item and press **F2**.



The system displays the Event Log Browse screen. All records are displayed in descending order of date and time.



3. Press **PgDn** to view the next page of the Event Log Browse screen or Press **Esc** to return to the Main Menu.

Understanding the Event Log

The Event Log provides information about system activity. System activity is shown under the **Action:** column of the Event Log. Table 2–1 lists the possible combinations of Event Log Browse action fields.

Table 2–1: Event Log Action Fields (1 of 2)

Action	Subject	Description
ADD[1]	BAT (Batch) OPID (Operator) TRKI (Tracking Incoming) TRKO (Tracking Outgoing)	Add transactions to batch Add operator ID Add records during receive Add records during send
BEG (Begin)	EXP (Export) IMP (Import) RECB (Receive from BASE II) RECV (Receive from V.I.P.) SEND	Open new export file Start import file Start receiving files from BASE II Start receiving files from V.I.P. Start sending
CMP (Compress)	TRK (tracking file)	Compress tracking file
DEL (Delete)	BAT (Batch) FILE OPID (Operator) TRK (Tracking File)	Delete transactions in a batch Delete file Delete operator ID Delete tracking file
END	EXP (Export) IMP (Import) RECB (Receive from BASE II) RECV (Receive from V.I.P.) SEND	Stop exporting Stop importing Stop receiving files from BASE II Stop receiving files from V.I.P. Stop sending files
ERR (Error)	IMP (Import) RECB (Receive from BASE II) RECV (Receive from V.I.P.) RCVY (Recovery) RPT (Report) SEND	Invalid records received in import Invalid records received from BASE II Invalid records received from V.I.P. Invalid records recovered Invalid records in reports Invalid records sent
GEN (Generate)	RPT (Reports)	Generate reports
LOG	OFF, ON	Log off, log on

Table 2–1: Event Log Action Fields (2 of 2)

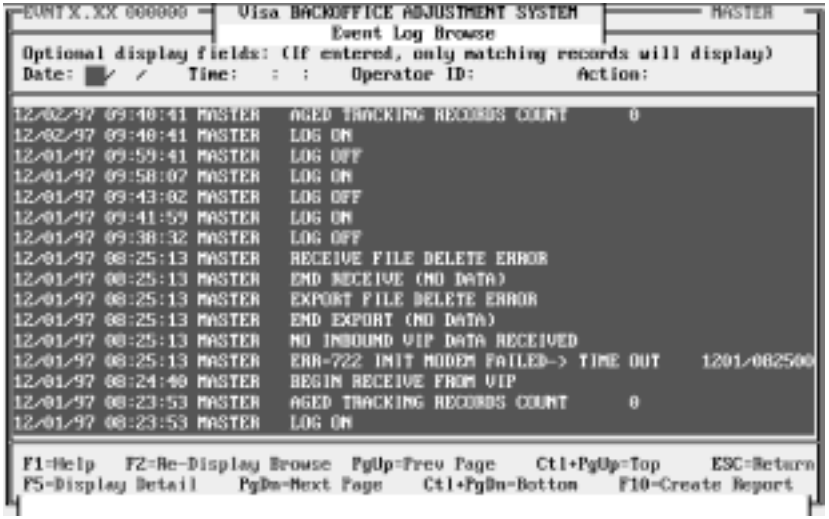
Action	Subject	Description
MDM	SEND, RECV	Modem Baud Rate
PRG (Purge)	TRK (Tracking File)	Purge the tracking file
PRT (Print)	RPT (Reports)	Print reports
UPD[1] (Update)	BAT (Batch) OPID (Operator) PROF (Profile) TIME TRK (Tracking File)	Update the batch Update the Operator ID file Update the system profile Modify the date/time at sign-on Update the tracking file record

[1]You can also add, update, and search for a specific screen. Use the four-character screen ID to specify the screen.

Searching for a Specific Record

You can search for a particular record in the event log by specifying either the date, time, operator ID, or action as a search parameter.

Begin your search from the Event Log Browse screen as described in "Viewing the Event Log."



When you have the Event Log Browse screen displayed, refer to Table 2–2 for a description of the Event Log Browse fields.

Table 2–2: Event Log Search Parameters (1 of 2)

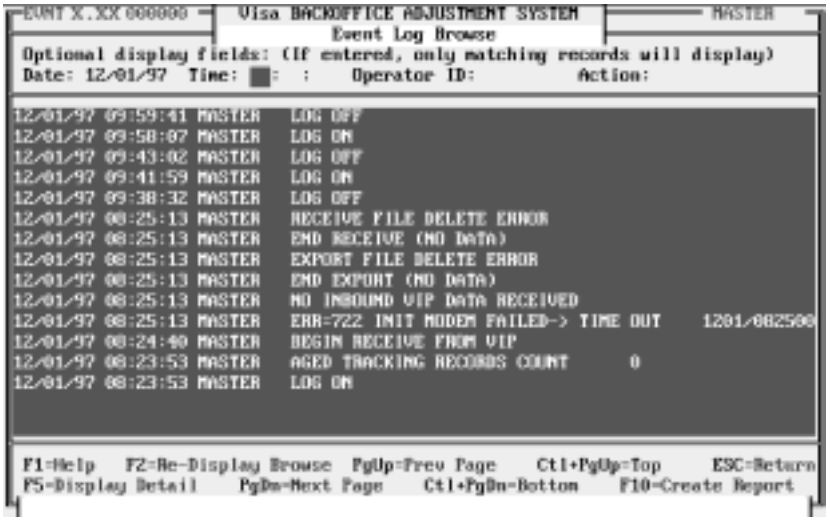
Field	Description
Date	The date should be entered in the same format chosen on the Profile System screen (mmddyy or ddmmyy).
Time	The time, in hhmmss format, that system events are displayed.
Operator ID	This field identifies the specific operator whose system activity you want displayed.

Table 2–2: Event Log Search Parameters (2 of 2)

Field	Description
Action	The specific system event that you want to see displayed. This field is potentially a two-part field (the second parameter describes the displayed system events), with valid values. Refer to Table 2–1 for current action values.

➤ **To search for a specific record:**

1. Enter your search parameters (date, time, operator ID, or action) at the top of the screen. You can search for any combination of the search parameters. Press **F2** and BOAS will search for a matching record. In the following example, the search was for events on December 1, 1997.



If no matching records are found, you will receive the following system message:

`E601 No matching records found.`

2. At this point, you can search for another record or continue to press **Esc** to return to the Main Menu.

Displaying Detailed Event Records

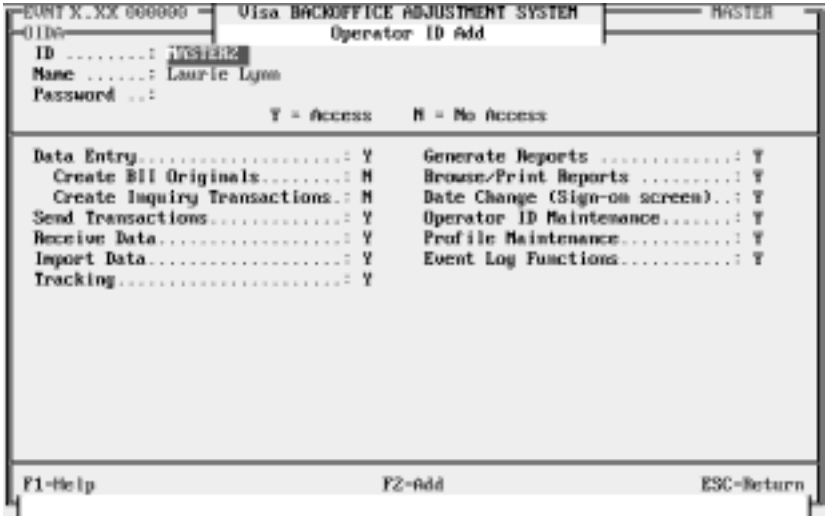
Use this feature to display detailed original event records for a particular event shown in the Event Log. Events include operator record changes, profile maintenance record updates, and transaction adds or deletes.

Begin this procedure from the Event Log Browse screen as shown in "Viewing the Event Log." Refer to Table 2–1 for a description of the Event Log Action fields.

➤ **To display detailed event records:**

1. Highlight the event you want to display.

2. Press **F5** to display the details related to the system event. If a detailed record exists for the event, it will be displayed.



You cannot edit the record. If a detailed record does not exist, you will receive a message at the bottom of the screen indicating that no record exists.

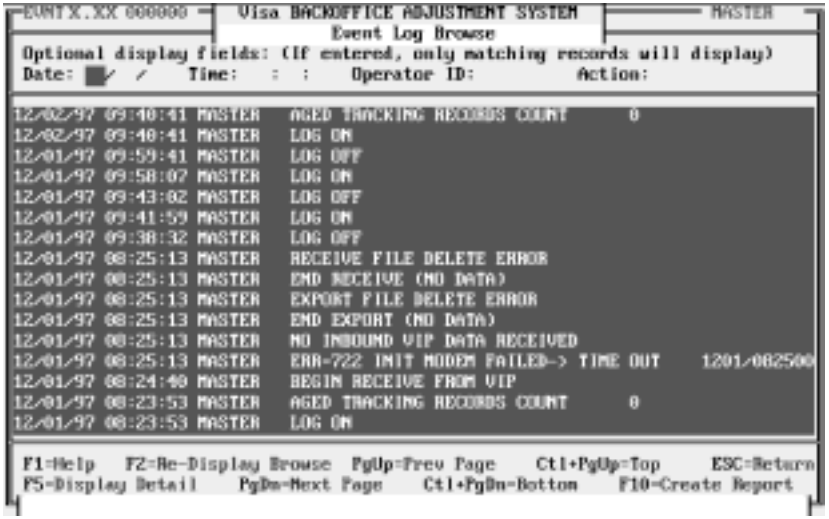
3. Display detailed records for another transaction by repeating step 1 or press **Esc** to return to the Main Menu.

The next section describes how to create a report from your Event Log.

Creating an Event Log Report

Use this feature to create event log reports for tracking BOAS access dates, times, operator IDs, and activities.

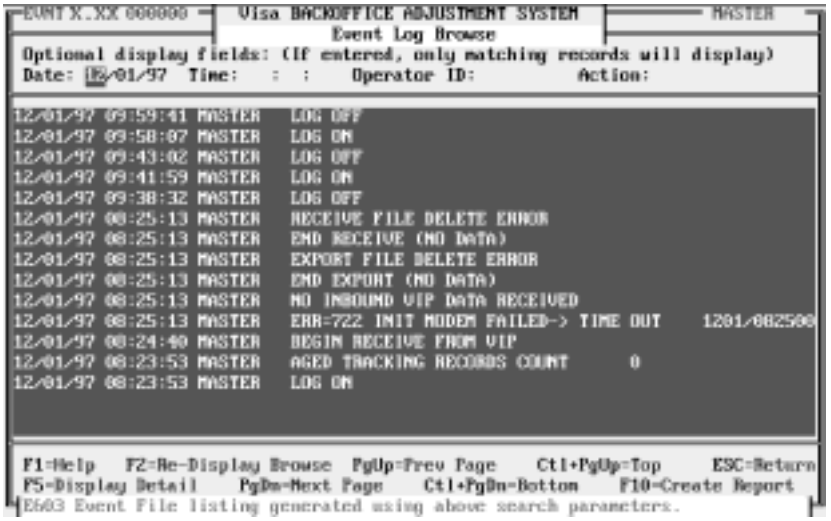
You must be at the Event Log Browse screen to create reports as shown in "Viewing the Event Log."



➤ **To create a report:**

1. To specify what you want on the report, enter the desired date, time, operator ID, and action in the appropriate field (or fields). For a description of the Event Log search parameters, refer to Table 2–2 in "Searching for a Specific Record."
2. Press **F10**.

BOAS creates a report for any records matching the search parameters specified in step 1. (The reports do not appear on the Event Log Browse screen. They are displayed on a separate Reporting screen.)



If BOAS found matching records, you will see the following system message:

E603 Event File listing generated using above search parameters.

If no matching records are found, you will receive the following system message:

E601 No matching records found.

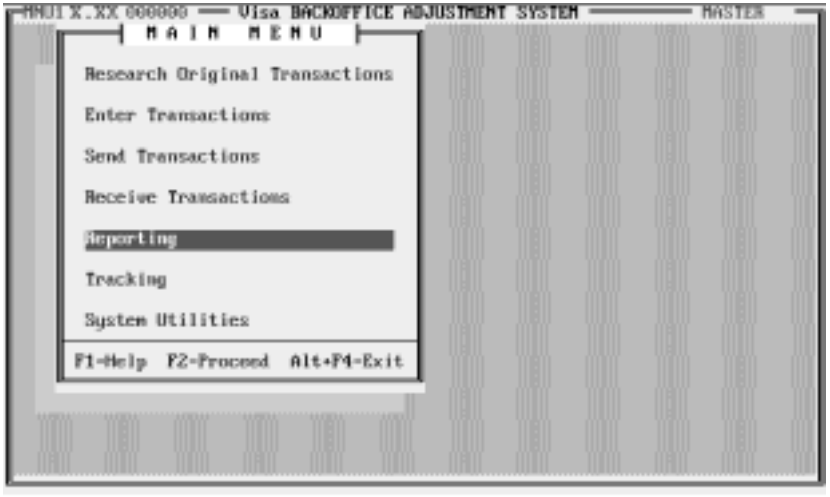
Note: *You can only create one Event Log report at a time. If you need to create several reports, print the first report before creating another. See the next section, "Printing an Event Log Report" for instructions.*

Printing an Event Log Report

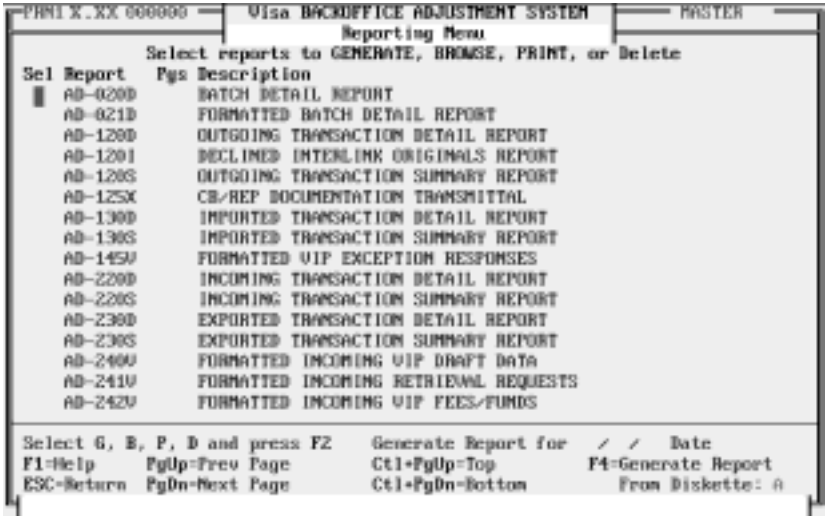
Before you can print an event log report, you must first create it. See the "Creating an Event Log Report" section.

➤ **To print an event log report:**

1. Press **Esc** twice to return to the Main Menu. The system displays the Reporting menu item.

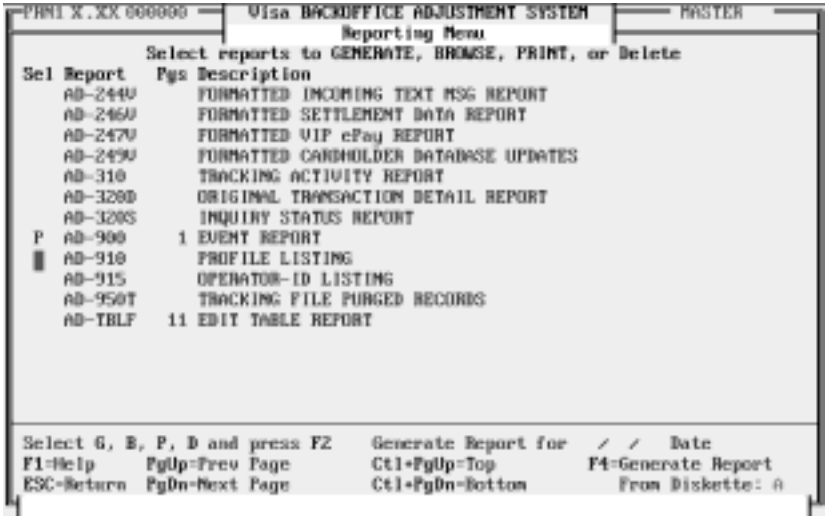


2. Highlight the Reporting menu item and press **F2**. The system displays the Reporting screen.



3. At the Reporting screen, press **PgDn** until you see the **AD-900 Event Report** item. (AD-900 identifies event reports.)

4. Enter **P** in the **Sel** column and press **F2**.



Once BOAS prints your Event Report, you can return to the Event Log or the Main Menu by pressing **Esc**.

Maintaining Operator IDs 3

Overview

The System Utilities function allows you to review system activity, manage operator IDs, set up your system profile, and import exception transactions into BOAS.

This chapter describes how to maintain the operator ID file. You can use the operator ID file to search for, add, and delete specific operator IDs. Only operators with the proper access level can maintain operator IDs.

Other chapters discuss the remaining system utility functions:

- Reviewing system activity
- Setting up your system profile
- Processing import files

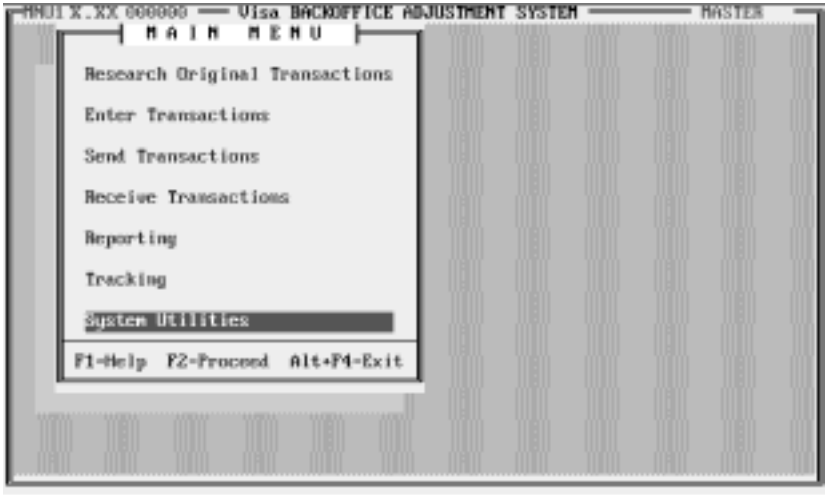
Accessing the Operator ID File

You can use the operator ID file to define operator access parameters. Use the Event Log, as described in Chapter 2, to monitor operator activity.

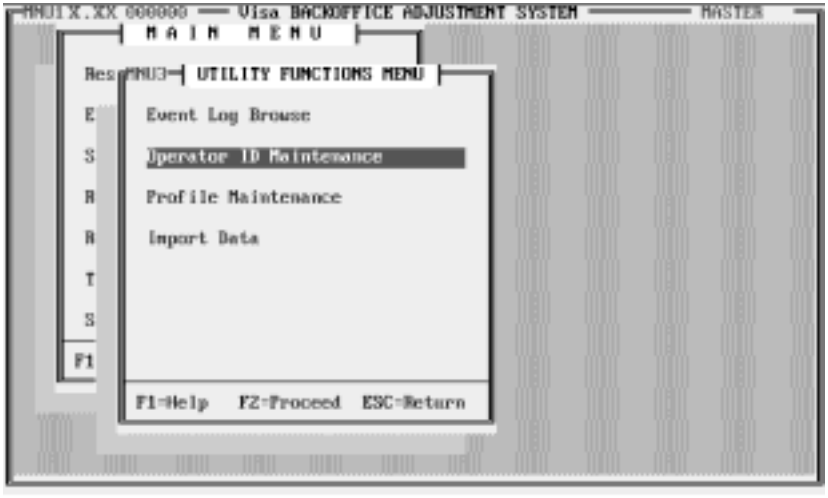
Only operator IDs with Operator ID Maintenance access rights can perform operator ID maintenance functions. Usually these access rights are assigned to the MASTER ID. Passwords are controlled by the operator, and are never displayed on screens or reports.

➤ **To access the operator ID file:**

1. At the Main Menu, highlight **System Utilities** and press **F2**.



The Utility Functions Menu displays.



2. At the Utility Functions Menu, highlight **Operator ID Maintenance** and press **F2**. The system displays the Operator ID Maintenance screen, which shows a list of operators including operator ID, name, and active status.

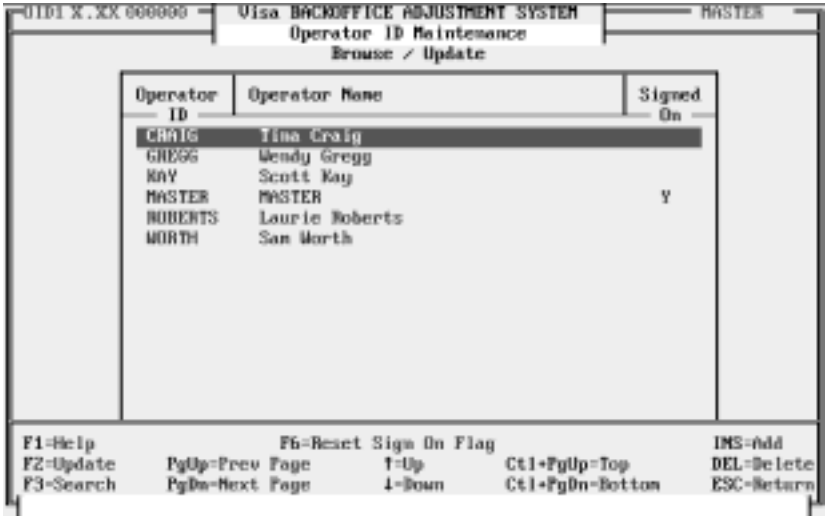


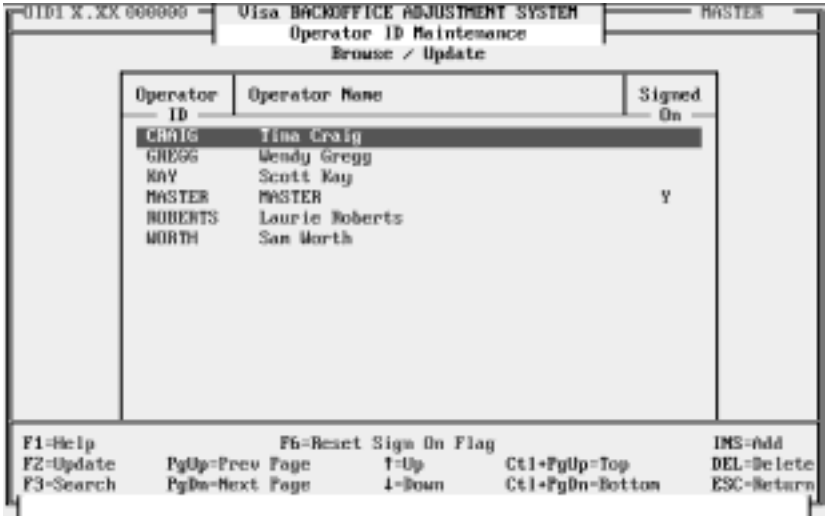
Table 3–1 describes the Operator ID Maintenance fields.

Table 3–1: Operator ID Maintenance Fields

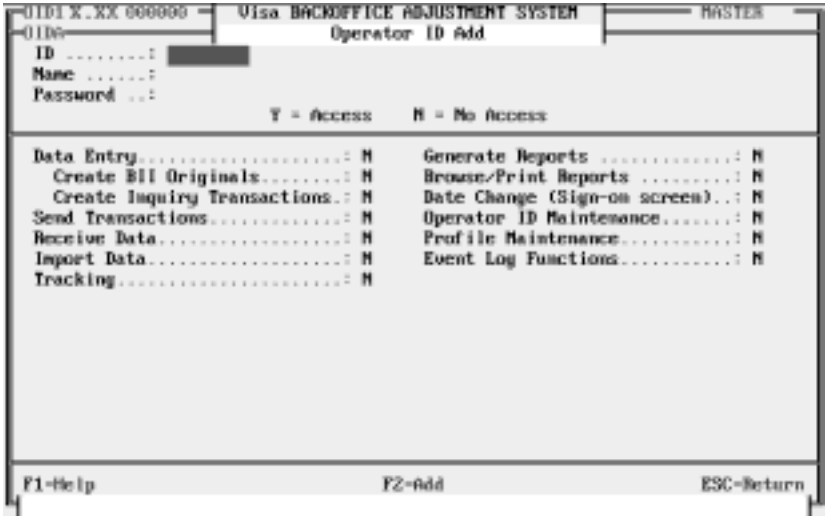
Field	Description
Operator ID	A unique code, from one to eight characters, assigned to an operator
Operator Name	The name of the operator (up to 34 characters)
Signed On	Indicates if the operator is currently signed on Y = active

Adding an Operator ID

Begin this procedure from the Operator ID Maintenance screen as shown in "Accessing the Operator ID File."



1. Press **Ins** from the Operator ID Maintenance screen. Your current operator access rights are displayed on the Operator ID Add screen.



2. Enter the new Operator ID. (The ID must be between one and eight characters.)

3. Enter the operator's full name. (You can enter up to 34 characters.)
4. Enter the password. (The password must be between five and eight characters.) This is a default password. Operators will be prompted to enter a new password the next time they sign on.
5. Define the new operator's access rights by typing a **Y** next to the allowable tasks. See Table 3–2 for descriptions of these tasks.
6. Press **F2** to add the new operator ID. The system adds the new operator to the file.
7. Repeat steps 1 through 6 until all your operators are listed in the Operator ID Maintenance screen or press **Esc** to return to the Main Menu.

The following sections explain how to search for and modify an existing operator ID file.

Table 3–2 describes the Operator ID Access fields.

Table 3–2: Operator ID Access Fields (1 of 2)

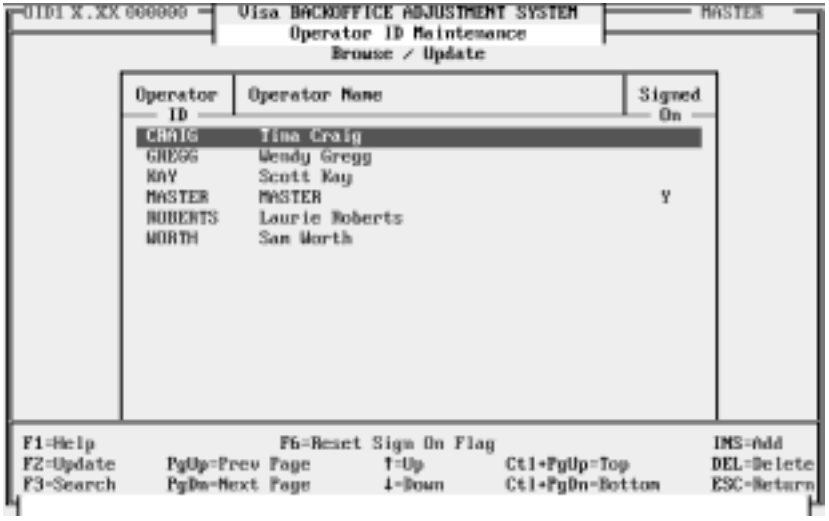
Field	Entering Y Allows the Operator to
Data Entry	Enter transaction information
Create BII Originals	Create TC 05s, TC 06s, TC 07s (usage code = 1)
Create Inquiry Transactions	Research and inquire about original transactions. Also create exception transactions from originals' database.
Send Transactions	Send exception transactions to Visa
Receive Data	Receive exception transactions from Visa
Import Data	Import exception transactions to BOAS
Tracking	Track the status of BOAS transactions
Generate Reports	Generate BOAS reports from Data Entry Batch, Tracking File, or Event Log ***Note:*** *This setting has no impact on functionality on the Reporting Menu.*

Table 3–2: Operator ID Access Fields (2 of 2)

Field	Entering Y Allows the Operator to
Browse/Print Reports	Search for and print reports
Date Change (Sign-on screen)	Modify the date and time when signing on
Operator ID Maintenance	Search for, add, change, and delete operator IDs
Profile Maintenance	• Define system profile • Set security parameters • Define network profile • Print, export, and track transactions • Set values to manage transaction aging • Generate and print BOAS reports automatically • Define when files should be archived and deleted, and compressed
Event Log Functions	View the Event Log

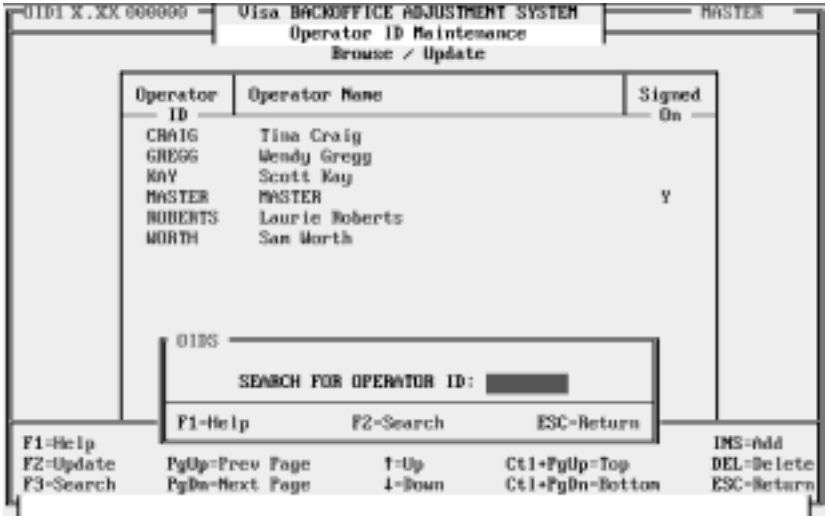
Searching for an Operator ID

You must begin this procedure from the Operator ID Maintenance screen, as shown in "Accessing the Operator ID File."



➤ **To search for a particular operator:**

1. Press **F3** to search for a particular operator ID. The Search for Operator ID dialog box appears.



2. Type in the operator ID you want to search.
3. Press **F2**. If the operator ID exists on the system, it displays (highlighted) on the Operator ID Maintenance screen. If the operator does not exist, the following message displays:

   E175 Search-for operator ID is not on file.

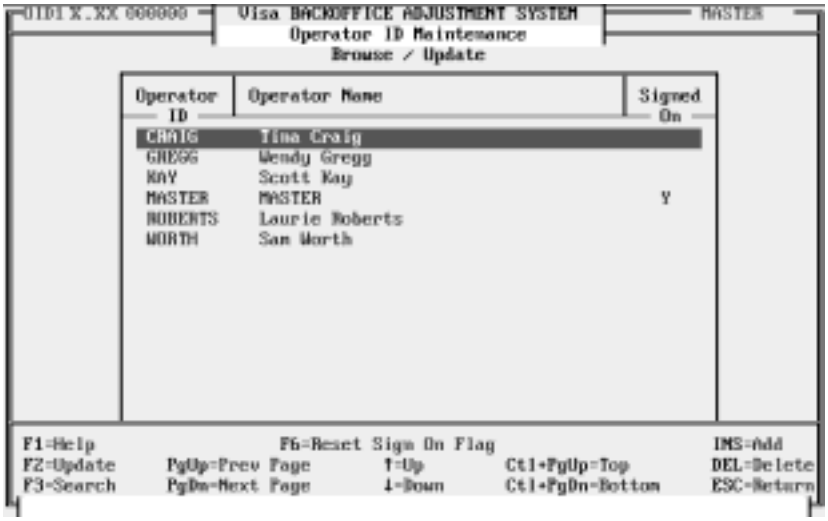
The next sections explain how to change and delete an operator ID.

Changing an Operator ID

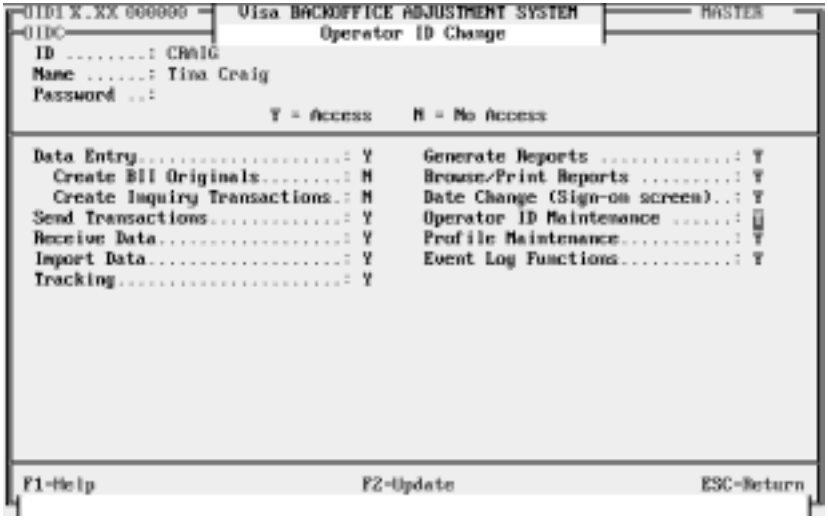
Begin this procedure from the Operator ID Maintenance screen as shown in "Accessing the Operator ID File." Refer to Table 3–1 for a description of the Operator ID Maintenance fields.

➤ **To change an operator ID:**

1. Highlight the operator name on the Operator ID Maintenance screen and press **F2**.



The system displays the Operator ID Change screen with the predefined access rights shown for that operator. See Table 3–2 for a description of the access fields.



2. Enter any changes to the operator ID, name, password, or access privileges and press **F2** to update. The system returns you to the Operator ID Maintenance screen.

3. Repeat steps 1 and 2 to change another operator ID or continue to press **Esc** to return to the Main Menu.

   Note: *When changes are made to an operator's record, the operator must change passwords when logging on.*

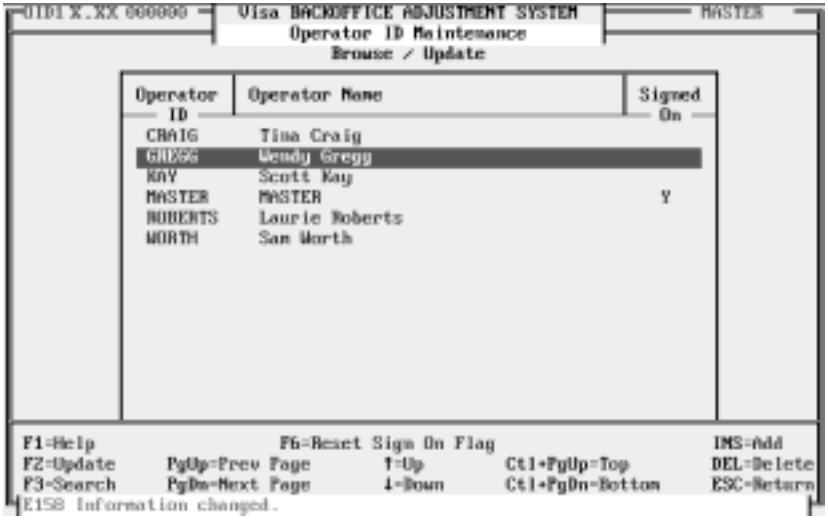
The next section explains how to delete an operator ID.

Deleting an Operator ID

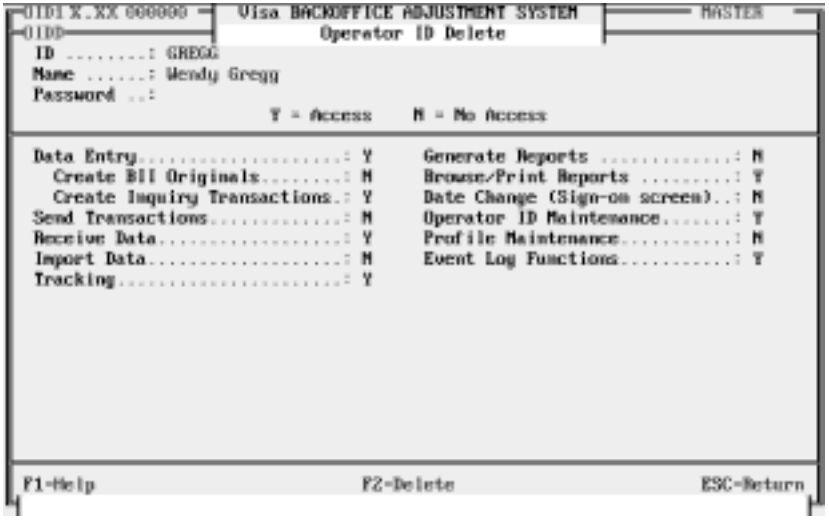
You may need to delete operator ID files when employees change jobs, or are no longer employed at your financial institution. You must begin this procedure from the Operator ID Maintenance screen as shown in "Accessing the Operator ID File." Refer to Table 3–1 for a description of the Operator ID Maintenance fields.

➤ **To delete an operator ID:**

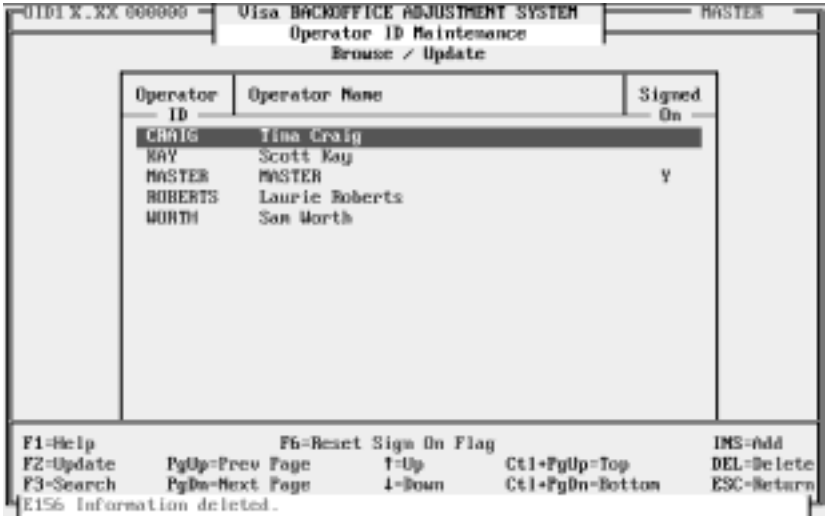
1. Highlight the operator name on the Operator ID Maintenance screen and press **Del**.



The system displays existing information for the operator on the Operator ID Delete screen.



2. Press **F2** to delete the highlighted operator ID. The system displays the Operator ID Maintenance screen with the previously highlighted operator deleted.



3. Repeat steps 1 and 2 to delete another operator ID or continue to press **Esc** to return to the Main Menu.

Chapter 4 explains how to set up your system profile within BOAS.

Setting Up Your System Profile 4

Overview

The System Utilities function allows you to review system activity, manage operator IDs, set up your system profile, and import exception transactions into BOAS.

This chapter explains how to set transaction processing parameters specific to your processing environment. You can customize your system through seven different profile screens:

- System Profile—defines your member name, connection type, products, and data entry defaults.
- Security Profile—defines Operator ID security parameters for the BOAS PC.
- Network Profile—contains VAP identification information, such as Station IDs, passwords, and phone numbers.
- Transaction Profile—controls the printing, exporting, and tracking of transaction types.
- Aging Alert Profile—identifies the number of days before transactions on the Tracking File are considered “aged” and, therefore, in need of immediate action or purging.
- Reporting Profile—specifies which reports you want automatically generated, printed, or both.
- Data Maintenance Profile—defines when files should be archived, deleted, or compressed.

You can access each Profile Maintenance screen and set values to meet your requirements. You *must* define the System Profile and Network Profile (for V.I.P. Connect only) for your institution after BOAS is installed. Also, you *must* log off the BOAS system after updating any profile.

Other chapters discuss the remaining system utility functions:

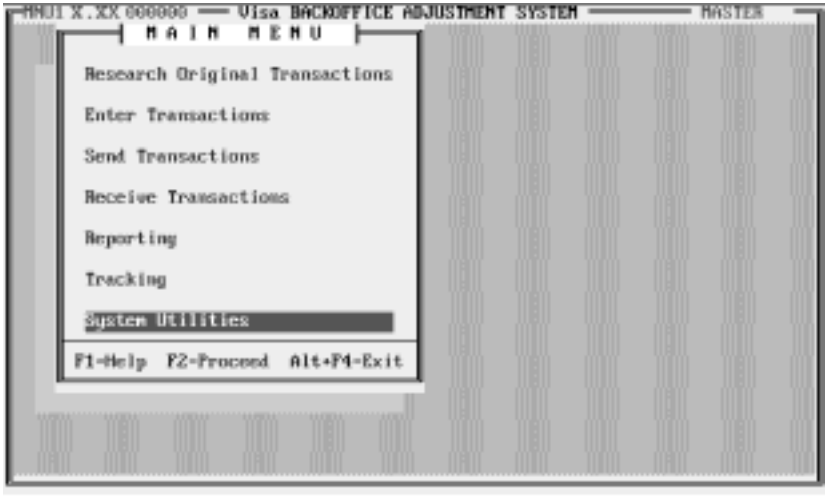
- Reviewing system activity
- Maintaining operator IDs
- Processing import files

Accessing the Profile Maintenance Menu

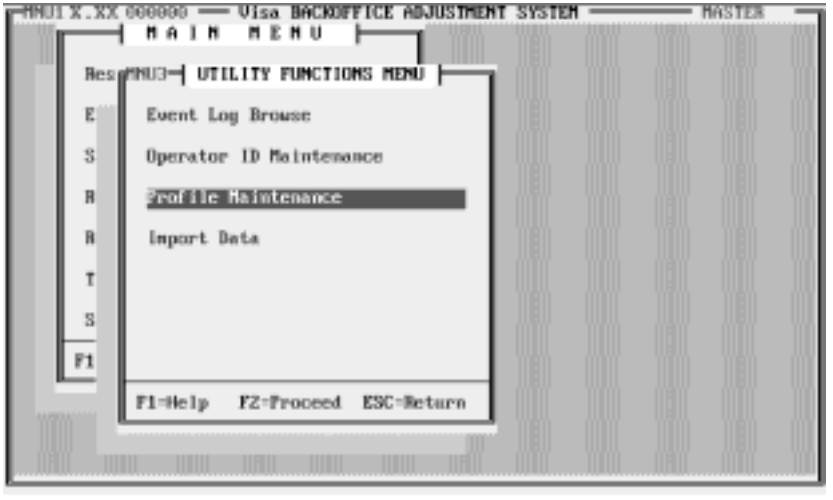
Each profile transaction screen is listed on the Profile Maintenance Menu.

➤ **To access the Profile Maintenance Menu:**

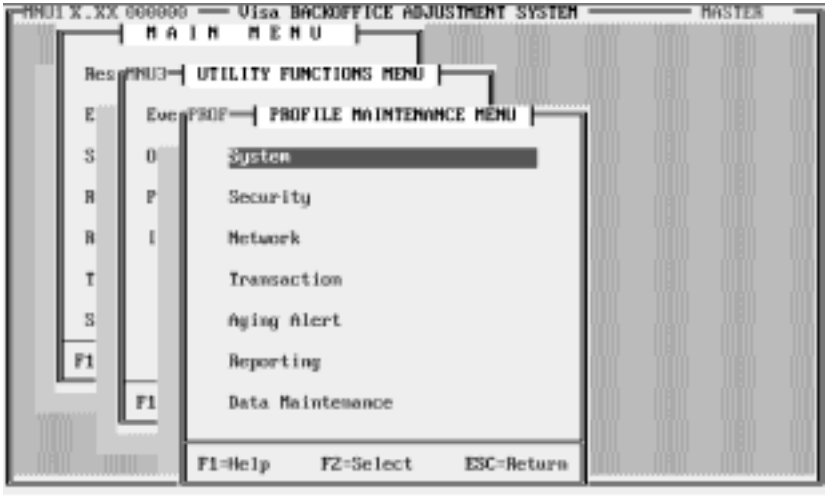
1. From the Main Menu, select **`System Utilities`** and press **F2**.



The Utility Functions Menu displays.



2. At the Utility Functions Menu, select **Profile Maintenance** and press **F2**. The system displays the Profile Maintenance Menu.



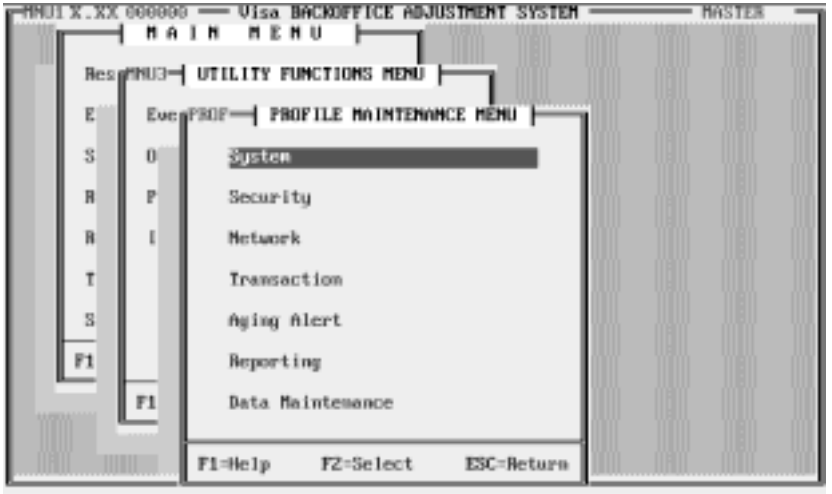
3. Select one of the utilities and then press **F2** or continue to press **Esc** to return to the Main Menu.

   Once the Profile Maintenance Menu displays, you can select one of the listed system utilities. These utilities are used to update and maintain your system profile and are described in the following subsections.

Updating Your System Profile

BOAS identifies your specific system capabilities from the System Profile screen. This information should be regularly updated and maintained.

Begin this procedure from the Profile Maintenance Menu as shown in "Accessing the Profile Maintenance Menu."



➤ **To update your system profile:**

1. At the Profile Maintenance Menu, highlight **System** and press **F2**. The system displays the System Profile screen.

2. Use the **Tab** or the **Up Arrow** and **Down Arrow** keys to locate the field you want to update. Table 4–1 describes the System Profile fields.
3. Enter or change the information, then press **F2** to update the system profile options.
4. Log off BOAS for your changes to take effect.

   Note: *You do not need to log off the BOAS system after changing the Disable Edits parameter on the System Profile screen. This parameter may be set and used in the same session.*

Continue to the next section to learn how to select your Product Type.

Table 4–1 describes the field items for the System Profile screen.

Table 4–1: System Profile Fields (1 of 3)

Field	Description
Name	Your member name. This name must match the name defined in the VAP BTS Table.
Processor Number	The primary BIN number used by Visa to alternately route transactions to your BOAS workstation.
Max Event Log Records	The maximum number of events that can be logged before the log number resets to one. The default value is 1,000 events. If Event Log usage is expected to be high, you may want to increase this value. The maximum number of events is 2,000.
Disable Edits	Remove (for one transaction) the edit checks that BOAS makes on certain screen fields. Possible values are: T = disable table edits A = disable all edits N = disable no edits The default is set to N=disable no edits. This is an edit override that should only be used when BOAS will not allow entry of valid data. *Caution:* Do not use this field without notifying Customer Services.
Connection Type	A code indicating how your BOAS workstation is connected to VisaNet; possible values are **VIP, BASE II,** or **BOTH**. This display-only informational field is determined by the products you select. (See the next section, "Selecting a Product Type," for information on selecting products.)
Printer Port	The printer ID to which BOAS reports are routed. For example, LPT1 or LPT2.
Date Format	A code indicating whether the system displays the date in MMDDYY format or DDMMYY format (1 = MMDDYY, 2 = DDMMYY). The default is set at 1=mmddyy.
Receive after Send	Setting this field to **Y** (yes) automatically invokes the receive process after every send if the profile connection type is **V.I.P.** or **BOTH**.

Table 4–1: System Profile Fields (2 of 3)

Field	Description
Enter Mbr-Calc IRF	Allows entry of field 119 on V.I.P. data entry panels.
VCRFS Configuration	**VCRFS Format** Indicates if VCRFS format is used for retrieval request transactions. Possible values are: A = always used N = never used S = selected on a transaction basis The default for this field is N. This field determines which transaction types are listed on the Transaction Menu. See the *Using BOAS With the Single Message System* user's guide for information on the Transaction Menu. **RFC Requested Fulfillment**—The field used to indicate that the member is requesting automated fulfillment of retrieval requests. Valid values are space, 0, or 1. **Issuer RFC BIN**—A six-digit value indicating the Visa Image Exchange Workstation (VIEW) for fulfillment routing or Fax Gateway BIN. **Source Sub-Address—**The sub-address of the Visa Image Exchange Workstation (VIEW) or the Fax Gateway BIN. **VDAS VIEW BIN—**A six-digit value indicating the Visa Image Exchange Workstation (VIEW) for chargeback/representment documentation and VCRFS images routing.

Table 4–1: System Profile Fields (3 of 3)

Field	Description
Data Entry Defaults	This field enables the data entry screens to be prefilled with the following information: **Currency Code**—A three-digit code that indicates the type of currency being used. The default is 840 for US dollars.[1] **Country Code**—A two-digit code that indicates the country where the member is located. The default is US.[1] **Merchant Country Code**—A two-digit code indicating the country in which the merchant is located. The default is US.[1] **Acquirer Institution ID**—The ID used for the acquirer bank identification number (BIN). **Visa Acquirer's Business ID**—The Visa-assigned Business ID. **Forwarding Institution ID**—The ID used by the member who is sending the message to Visa.

[1]Other valid currency codes, country codes, and merchant country codes are included in the BASE II Clearing & Settlement Data Codes and V.I.P. System SingleConnect and SMS technical specifications manuals.

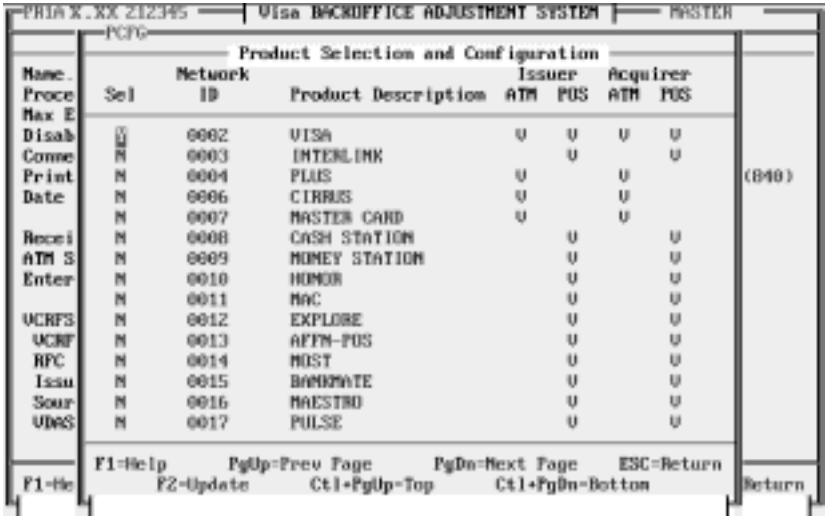
Selecting a Product Type

Once you have entered the required information on the System Profile screen, you must select the product types you want BOAS to process. The product type defines which networks are used with BOAS to process exceptions.

Begin this procedure from the System Profile screen as shown in "Updating Your System Profile."

➤ **To select a product type:**

1. At the System Profile screen, press **F8**. The Product Selection and Configuration screen displays.



   The Product Selection and Configuration fields are described in Table 4–2.

2. Type **Y** in the Sel column for the product types you want.
3. Type **V** (for the V.I.P. System), **B** (for the BASE II System), or **N** in the appropriate columns (issuers in the Issuer column, acquirers in the Acquirer column).
4. Repeat steps 2 and 3 for each product type you want to process.
5. Press **F2** to process your product type changes.
6. Log off BOAS for your changes to take effect.

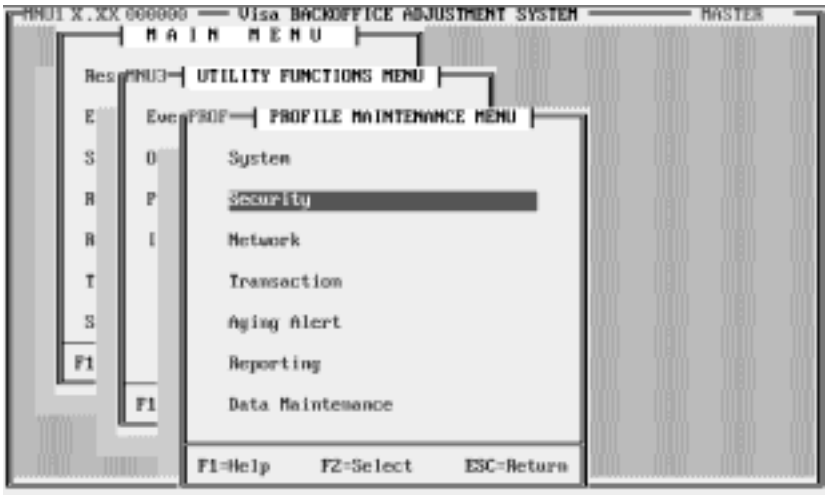
Table 4–2: Product Selection Screen Fields

Field	Description
Sel	A flag that activates the production selection. Y = selected, N = not selected
Network ID	The four-digit code that identifies the processing network
Product Description	The name of the product
Issuer ATM/POS	A code (V, B, or N) entered by issuers to indicate V.I.P. or BASE II processing for both ATM and point of sale (POS)
Acquirer ATM/POS	A code entered by acquirers to indicate V.I.P. or BASE II processing for both ATM and point of sale (POS)

Setting System Security Parameters

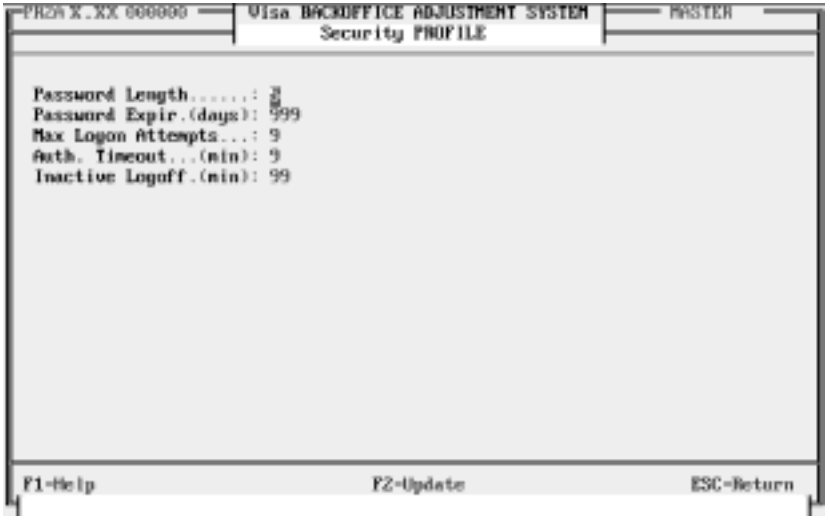
BOAS allows you to set security parameters to meet your individual security requirements. Use this menu to change password lengths and expiration dates, and user logon attempts.

Begin this procedure from the Profile Maintenance Menu as shown in "Accessing the Profile Maintenance Menu."



➤ **To set system security parameters:**

1. At the Profile Maintenance Menu, highlight **Security** and press **F2**. The system displays the Security Profile screen.



2. Select the field you want to update by using the **Tab** or the **Up Arrow** and **Down Arrow** keys.

   Table 4–3 describes the Security Profile fields.

3. Enter the information and press **F2** to update the security profile options.

4. Log off BOAS for your changes to take effect.

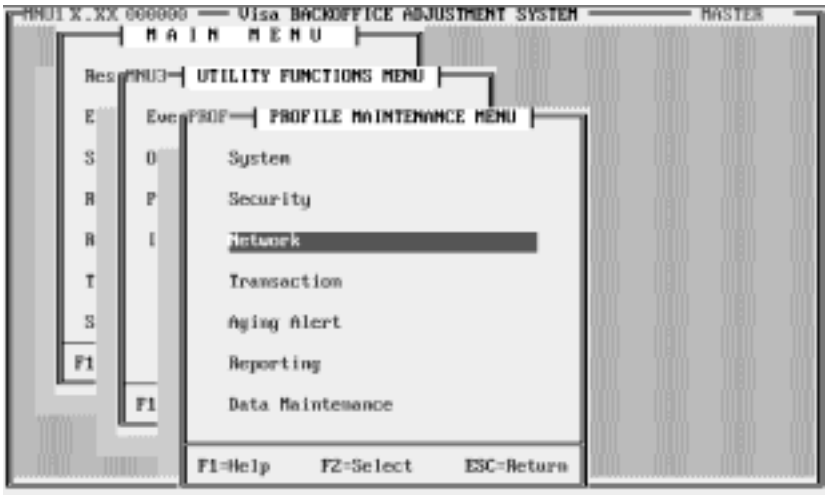
Table 4–3: Security Profile Fields

Field	Description
Password Length	The minimum required length of the user's password. A password can be five to eight characters in length.
Password Expir.	The number of days a password can remain valid (999=password never expires). Valid values are 1 through 999.
Max Logon Attempts	The number of logon attempts after which the user ID is suspended. Valid values are 1 to 9.
Auth. Timeout	The amount of time, in minutes, users have to complete their logon before the session is terminated. Valid values are 1 to 9.
Inactive Logoff	The amount of time (in minutes) that a user has until automatic logoff occurs, calculated from the last operator keystroke. Once a "timeout" has occurred, the user will be logged off the system. If data had been entered, the system will not save it. Valid values are 1 to 60, or 99. Entering 99 indicates that BOAS will not enforce any time limits.

Updating the Network Profile

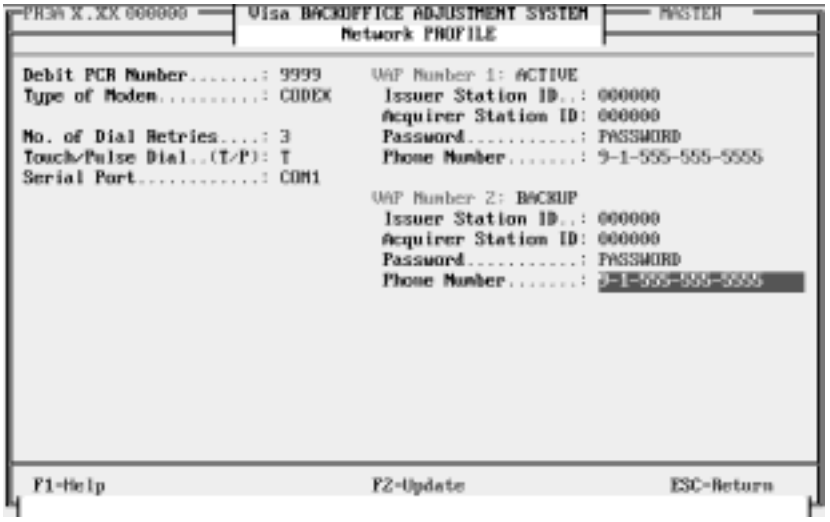
The Network Profile contains information necessary for BOAS to connect to the VAP, including Station IDs and phone numbers. You *must* update the network profile after BOAS is installed.

Begin this procedure from the Profile Maintenance Menu as shown in "Accessing the Profile Maintenance Menu."



➤ **To update the network profile:**

1. At the Profile Maintenance Menu, highlight **Network** and press **F2**. The system displays the Network Profile screen.



2. Select the field you want to update by using the **Tab** or the **Up Arrow** and **Down Arrow** keys.

   The network profile fields are described in Table 4–4.

3. Enter your changes, and press **F2** to update the network profile options.

4. Log off BOAS for your changes to take effect.

The fields that can be updated are described in Table 4–4.

Table 4–4: Network Profile Fields (1 of 2)

Field	Description
Debit PCR Number	A V.I.P. identification number provided by Visa (for information only).
Type of Modem	The type of modem you are using with BOAS. Valid values are Codex, Hayes, or the file name of one of the ".mdm" files in the BOAS directory. To verify compatibility, call your Visa Representative for more information.

Table 4–4: Network Profile Fields (2 of 2)

Field	Description
No. of Dial Retries	The number of times the BOAS PC will redial the VAP telephone number. The default is set to 3, which is the number typically used for retries, although BOAS can support up to nine dial retries.
Touch/Pulse Dial	A code indicating the type of phone service in use. Valid values are 'T' for touch tone and 'P' for pulse.
Serial Port	The location of the serial port on your BOAS PC. Valid values are COM1 and COM2.
VAP Number 1	The primary VAP. This VAP is designated as **A**ctive or **B**ackup by keying an **A** or **B** as the first letter of the field. **Issuer Station ID**—The Visa-assigned VAP Station ID for the issuer. This value must match a VAP BTS table entry. **Acquirer Station ID**—The Visa-assigned VAP Station ID for the acquirer. This value must match a VAP BTS table entry. **Password**—Your authorized password to communicate with VAP. This value must match a VAP BTS table entry. **Phone Number**—The telephone number of the VAP you are using to connect to V.I.P.
VAP Number 2	The secondary VAP. This VAP is designated as **A**ctive or **B**ackup by keying an **A** or **B** as the first letter of the field. **Issuer Station ID**—The Visa-assigned VAP Station ID for the issuer. This value must match a VAP BTS table entry. **Acquirer Station ID**—The Visa-assigned VAP Station ID for the acquirer. This value must match a VAP BTS table entry. **Password**—Your authorized password to communicate with VAP. This value must match a VAP BTS table entry. **Phone Number**—The telephone number of the VAP you are using to connect to V.I.P.

Specifying Transaction Defaults

The Transaction Profile screen controls the printing, exporting, and tracking of all transactions supported by BOAS.

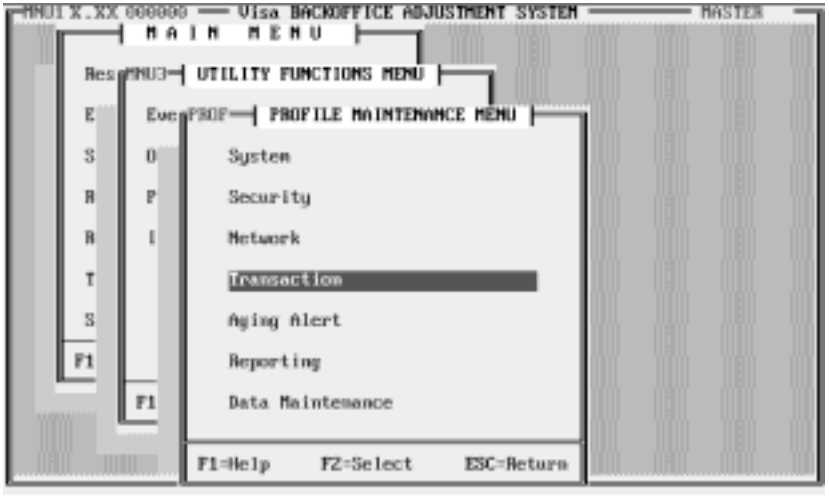
The default value for Print is **Y** for all transactions (except inquiry responses), which means BOAS will print this transaction type in reports. If you do not want to include all transactions in printed reports, you can selectively change the default to **N** for any transaction.

The default value for Exporting is **N** for all transactions. If you intend to create export files, you can indicate the transactions you want written to the export file by changing the default to **Y**. See Chapter 6 for more information on exporting files.

The default value for Tracking is **Y** for all specified transactions, which means BOAS will write these transactions to the tracking file. If you do not want to track all transactions, you can selectively change the default to **N** for any transaction.

Note: *If there is no value indicated on the screen, the function is not available for that transaction type.*

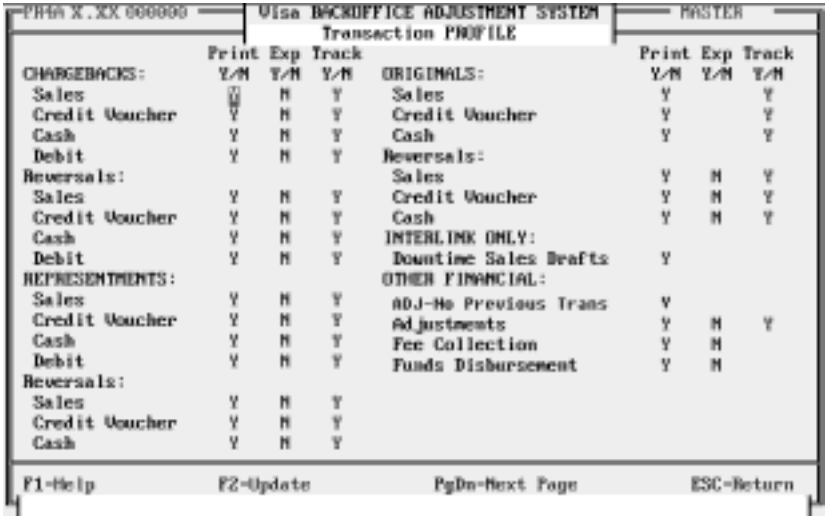
Begin this procedure from the Profile Maintenance Menu as shown in "Accessing the Profile Maintenance Menu."



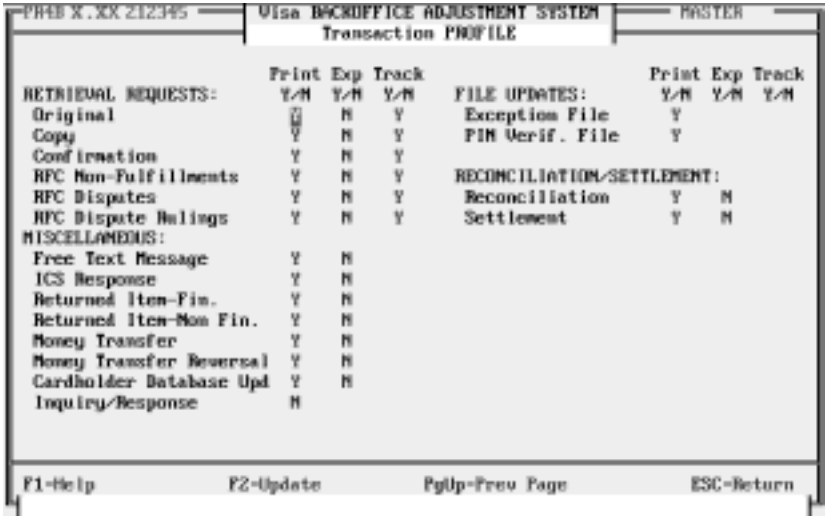
➤ **To update the transaction profile:**

1. At the Profile Maintenance Menu, highlight **`Transaction`** and press **F2**.

   The system displays the first page of the Transaction Profile screen.



   To access the second page of the Transaction Profile screen, press **PgDn**.



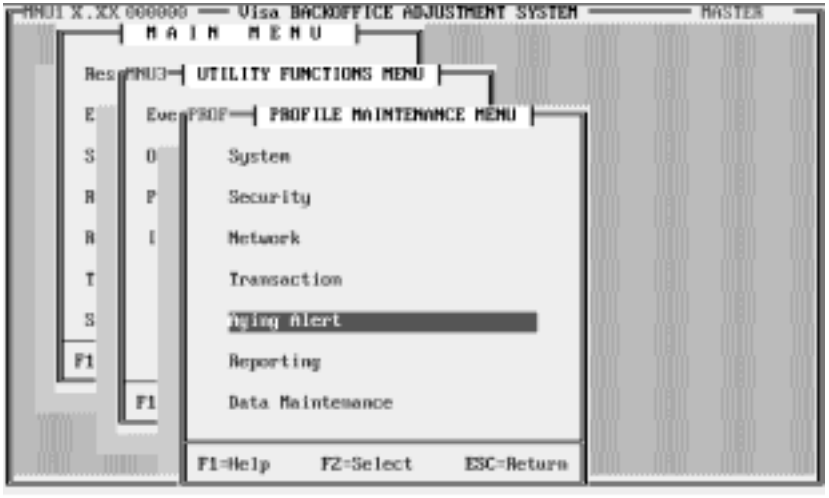
2. Select the transaction type you want to update by using the **Tab** or the **Up Arrow** and **Down Arrow** keys.
3. Type **Y** to activate printing, exporting, and tracking for each transaction type, and press **F2** to update the screen.
4. Log off BOAS for your changes to take effect.

Specifying Aged Transactions

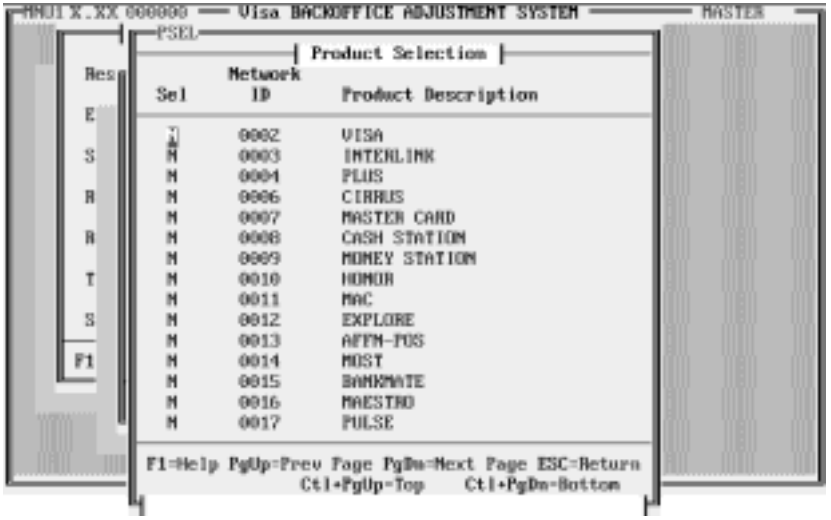
The Aging Alert Profile screens are used to specify the number of days before transactions on the Tracking File are considered “aged.” The number of days can vary from product to product and transaction type to transaction type. When a transaction is aged, some form of immediate attention is required.

➤ **To set the aging alert profile values:**

1. At the Profile Maintenance Menu, highlight **Aging Alert** and press **F2**.



The Product Selection screen appears.



Use the **Tab** or the **Up Arrow** and **Down Arrow** keys to move to the appropriate product type. Each Aging Alert Profile screen shows the different types of transactions that can be entered for each card product. The card product and network ID are displayed in the upper left corner of the screen. For example, typing **Y** next to Interlink displays the following screen.

2. Select the product type by typing **Y** in the Selection column next to the product name. The Aging Alert Profile screen for that product displays.
3. Enter the Tracking Retention Period. This is the number of days until the last transaction in a group can be purged from the Tracking File. A group is all transactions related to the original. The default retention period is 120 days. If you do not need to retain the exceptions on the tracking file for 120 days, you can decrease the number of days that exceptions are retained.
4. Enter the number of days that determine when a transaction is considered aged.

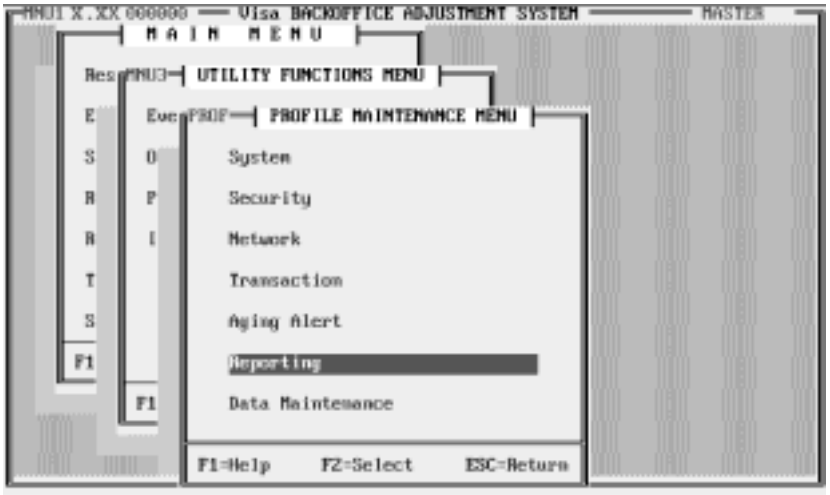
   You can set the Aging Alert Profile values to reflect operating regulation time frames. For example, the *Interlink Network Operating Rules* state that "all representations must be initiated within a period not to exceed fifteen (15) calendar days from the date the chargeback was received by the Merchant Member." If you are an Interlink acquirer and you set the Aging Alert Profile for chargebacks to seven days, BOAS will alert you to chargebacks requiring action before the 15 days have expired.
5. Press **F2** to update the screen.
6. Log off BOAS for your changes to take effect.

Generating BOAS Reports

The Reporting Profile screen allows you to set up reports for automatic generation and printing. You should decide which reports you will use most frequently and let BOAS automatically generate and print them when you finish the associated task.

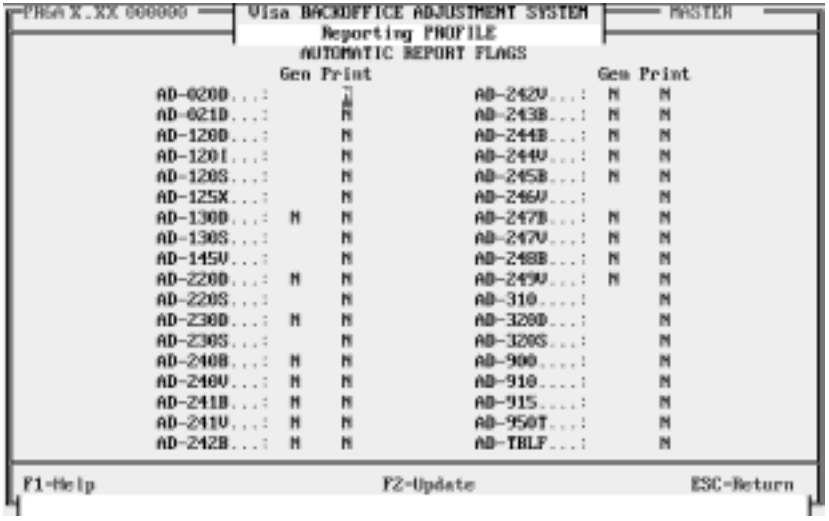
Note: *Reports must be generated before they can be printed.*

Begin this procedure from the Profile Maintenance Menu as shown in "Accessing the Profile Maintenance Menu."



➤ **To generate and print selected reports automatically:**

1. At the Profile Maintenance Menu, highlight **Reporting** and press **F2**. The Reporting Profile screen displays.



2. Type **Y** in the Gen (Generate) column of each report you want to generate automatically. Some reports are generated automatically by BOAS. See *Using BOAS With the Single Message System* and *Using BOAS With the BASE II System* for more specific information on generating reports.

   Note: *Only those reports with a previously designated Y or N value can be generated automatically.*

3. Type **Y** in the Print column of each report you want to print automatically. The default is **N** (no print). (All reports can be printed automatically.)

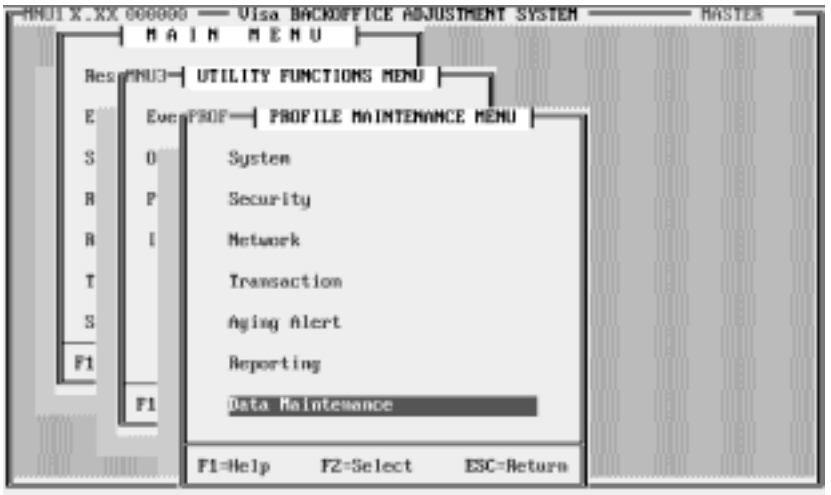
4. Press **F2** to update.

5. Log off BOAS for your changes to take effect.

Setting Archiving Parameters

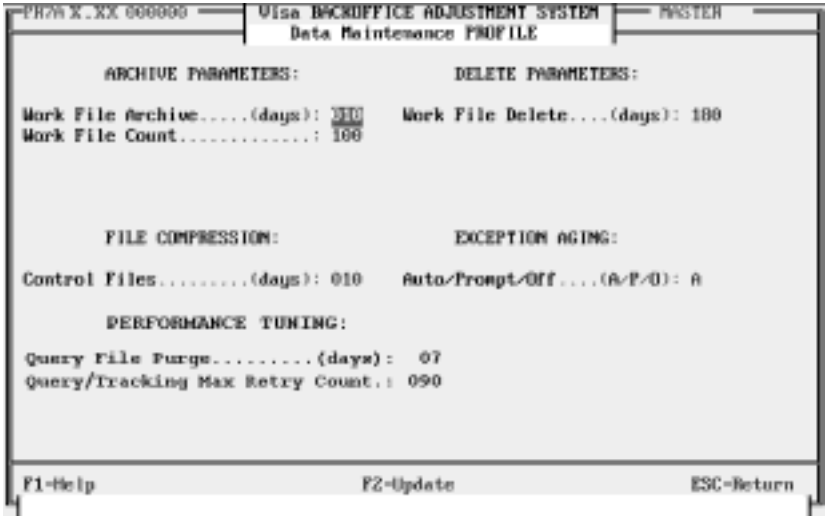
You can use the Data Maintenance Profile screen to define when files should be archived (Archive Parameters) and deleted, and to compress files.

Begin this procedure from the Profile Maintenance Menu as shown in "Accessing the Profile Maintenance Menu."



➤ **To set archiving parameters:**

1. At the Profile Maintenance Menu, highlight **Data Maintenance** and press **F2**. The Data Maintenance Profile screen appears.



2. Select the field you want to change by using the **Tab** or the **Up Arrow** and **Down Arrow** keys. Table 4–5 describes the Data Maintenance Profile fields.

3. Enter or change the information, then press **F2** to update the data maintenance profile options.

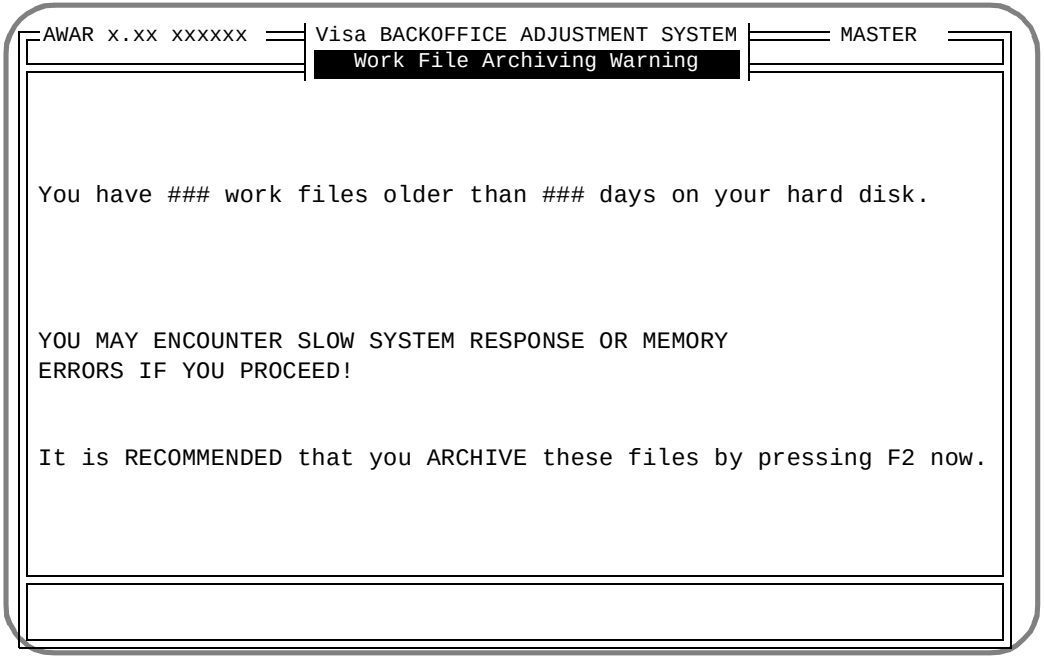
4. Log off BOAS for your changes to take effect.

Table 4–5: Network Profile Field Descriptions

Field	Description
Archive Parameters	• **Work File Archive**—The number of days after which a file can be archived. Files must be older than the number of days specified before they will be archived. • **Work File Count**—The number of files that are older than the number of days specified before archiving can occur.
Delete Parameters	**Work File Delete**—The number of days after archiving that the file record will be automatically deleted.
File Compression	**Control Files**—The number of days between compression of system files.
Exception Aging	**Auto/Prompt/Off**—Controls aging of tracking records. If set to **A** (automatic), the tracking file for aged records is searched automatically during log on. If set to **P** (prompt), the user has the option of bypassing the tracking file aging process at the first log on of the day. If set to **0** (off), tracking records will not be aged.
Performance Tuning	**Query File Purge**—Specifies the number days after which BOAS deletes records in the Query File. Valid values are 01 to 07. The default is 7 days. If you have a large daily volume of original data, you should decrease the number of days. **Query/Tracking Max Retry Count**—This is a LAN-specific parameter. It specifies how many times to retry getting access to either the Query or the Tracking file. The default is 90 times. If you prefer to time out sooner, you should decrease this number.

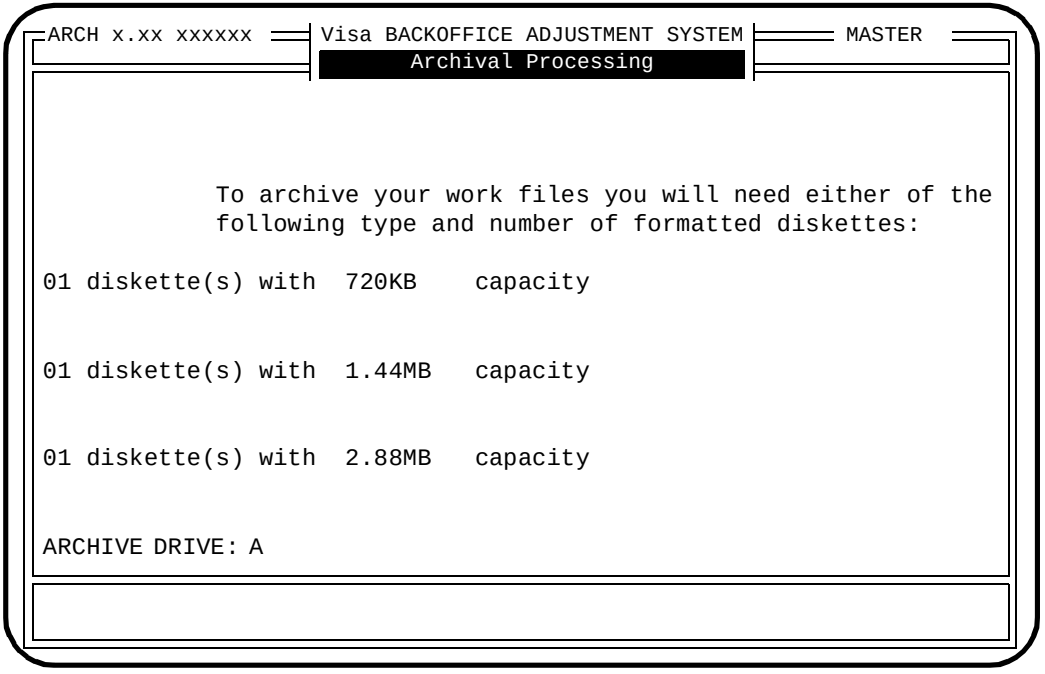
Archiving Data Files

The Work File Archiving Warning screen appears at the first logon of the day when the files reach the number and age defined in the Archive Parameters on the Data Maintenance Profile Screen. It is recommended that files be archived whenever the Work File Archiving Warning screen appears. All work files are automatically deleted from the hard drive after they are archived successfully.



➤ **To archive work files:**

1. At the Work File Archiving Warning screen, press **F2**. The system displays the Archival Processing screen.
2. Follow the instructions on the screen and press **F2** to begin archiving.



Processing Import Files 5

Overview

The System Utilities function allows you to review system activity, manage operator IDs, set up your system profile, and import exception transactions into BOAS.

This chapter describes the BOAS Import function, which allows you to import exception transaction files from your host system or another external system into BOAS. To import the transaction files, they must be formatted correctly. The remainder of the chapter describes these file formats.

Previous chapters discuss the remaining system utility functions:

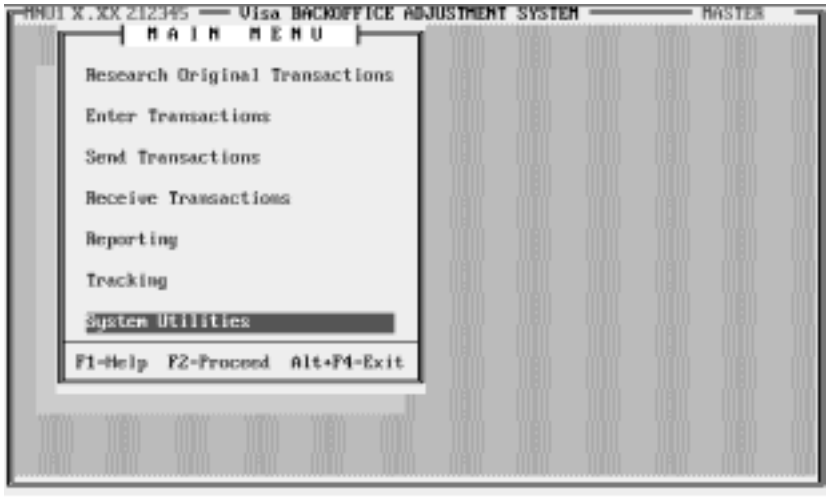
- Reviewing system activity
- Maintaining operator IDs
- Setting up your system profile

Using the Import Data Function

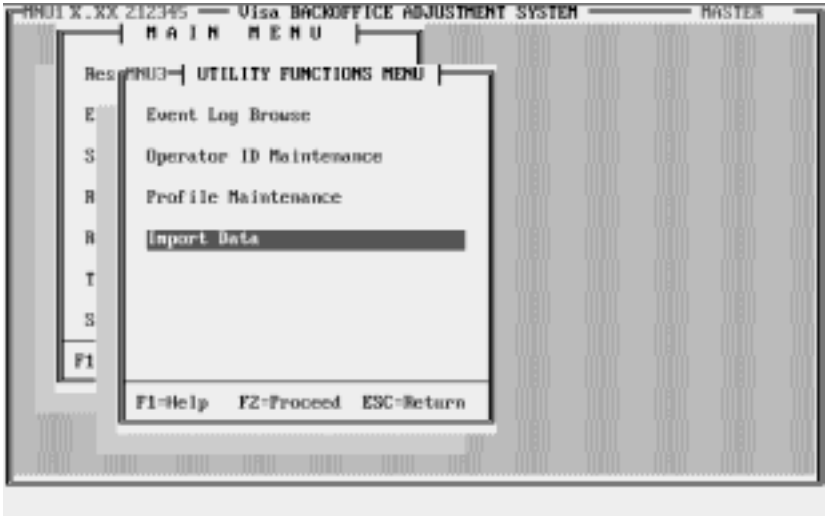
The Import Data screen allows you to import exception transaction files from your host system to BOAS in one of two formats: CTF or VIP. The remainder of this chapter explains how to map your import files to one of these two formats.

To import data:

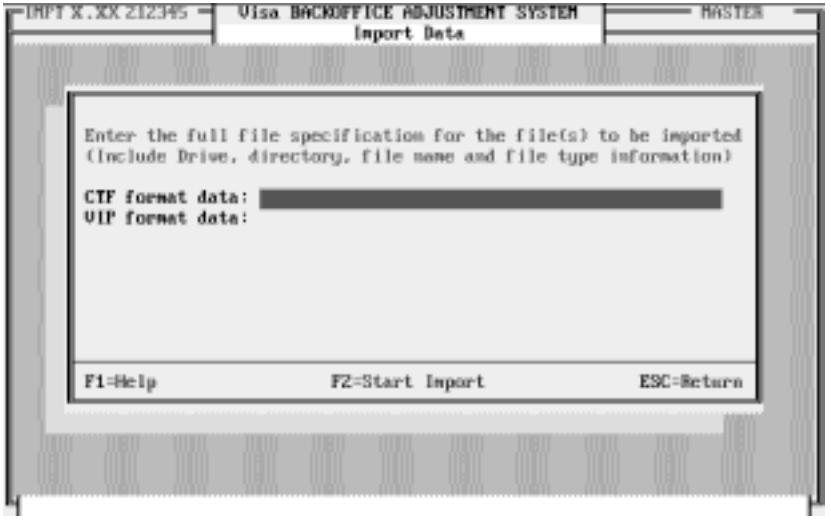
1. At the Main Menu, highlight **System Utilities** and press **F2**.



2. At the Utility Functions Menu, highlight **Import Data** and press **F2**.



The Import Data screen displays.



3. Enter the path for the file you want to import next to the appropriate format including drive, directory, and file name.

   CTF (Center Transaction Files) is used to import BASE II files.
   VIP (expanded ISO format) is used to import V.I.P. files.

4. Press **F2** to begin importing.

Formatting Import Files

Before BOAS can accept a file generated by another system, the file must be converted to a format acceptable to BOAS and the VisaNet system. These user-created files are called import files. There are two possible formats for import files:

- Center Transaction Files (CTF) format for BASE II transactions
- Expanded ISO format for V.I.P. transactions

As a user, you are responsible for creating, naming, and deleting these files. You must provide the system with the appropriate DOS import file names.

Formatting a BASE II Import File

A BASE II import file must use the standard CTF format. CTFs are sequential files with fixed-length records. Each CTF contains one or more logical transactions, each of which is defined by a transaction code (TC) and one or more transaction component records (TCR). Each record is 168 bytes long.

For more details on CTF formats, refer to the *BASE II Clearing & Settlement Interchange Formats*.

Transactions rejected by the Edit Package's outgoing control program can be written—by the use of a run control option—to a separate CTF for correction and re-entry. This separate CTF includes TC 91 (Batch Trailer) and TC 92 (File Trailer) records. A TC 90 (Header Record) is also supplied if the processing center included it on the original outgoing CTF.

The outgoing Edit Package CTF has a batch record capacity of 999; however, centers can modify this to allow for up to 3300 records in a batch if their VAPs permit.

Current TC records for importing files are listed in Table 5–1.

Table 5–1: BASE II Import Transaction Codes (1 of 2)

Transaction Format	Description
TC 05	Sales Draft or Representment
TC 06	Credit Voucher
TC 07	Cash Disbursement
TC 10	Fee Collection Transactions
TC 15	Sales Draft Chargeback
TC 16	Credit Voucher Chargeback
TC 17	Cash Disbursement Chargeback
TC 20	Funds Disbursement Transactions
TC 25	Sales Draft Reversal
TC 26	Credit Voucher Reversal
TC 27	Cash Disbursement Reversal
TC 30	ICS Input Processing
TC 35	Sales Draft Chargeback Reversal
TC 36	Credit Chargeback Reversal
TC 37	Cash Chargeback Reversal
TC 38	Copy Request and Fulfillment Service Message Transactions (Nonfulfillments and Dispute Requests)
TC 40	Fraud Advice Transactions
TC 42	Merchant File Update-1
TC 43	Merchant File Update-2
TC 50	Text Message Transactions
TC 51	Retrieval Request for Original Paper
TC 52	Retrieval Request for Photocopy or Substitute Draft

Table 5–1: BASE II Import Transaction Codes (2 of 2)

Transaction Format	Description
TC 53	Confirmation Record for Photocopy or Original Mailing
TC 90	File Header Records
TC 91, 92	Batch and File Trailer Records

Formatting a V.I.P. Import File

A V.I.P. import file must be formatted in the expanded ISO format. Each record must contain:

- Header data (84 bytes)
- Variable-length, expanded ISO-formatted data, to a maximum of 1024 bytes

Each record must contain header data formatted as described in Table 5–2. For more information, see the V.I.P. System SingleConnect and SMS technical specifications manuals. Refer to the About This Guide chapter for a list of V.I.P. books.

Table 5–2: V.I.P. Import File—Header Data (1 of 2)

Field	Position	Length	Format[1]	Comments
Data Length	1–4	4	UN	Total length of the variable data to follow in this record
Low Value	5	1	AN	Hex “00”
Batch ID	6–13	8	AN	Leave blank
Batch Sequence Number	14–16	3	UN	Zeroes
Account Number	17–35	19	AN	Account number (left justified)
Filler	36–50	15	AN	Blanks

Table 5–2: V.I.P. Import File—Header Data (2 of 2)

Field	Position	Length	Format[1]	Comments
Connection Type	51	1	AN	V = V.I.P.
Network ID	52–55	4	UN	See Table 5–4 for a list of network IDs.
Transaction Type	56–58	3	UN	Transaction type code. See Table 5–5 for a list of transaction types and corresponding codes. ***Note:*** *If this field is left blank, you must include the required fields for the transaction type to ensure that the correct edits are executed and the SMS message is formatted correctly.*
Issuer/Acquirer	59	1	AN	I=Issuer A=Acquirer
Filler	60–63	4	AN	Blanks
Filler	64–67	4	UN	Zeroes
Amount	68–79	12	UN	Amount (12 digits)
Transaction Date	80–83	4	UN	Transaction date (mmdd format)
Low Value	84	1	AN	Hex “00”

[1]UN = unpacked numeric; AN = alphanumeric

V.I.P. Import File—Data Description

The main body of the expanded ISO formatted record is variable in length and may contain multiple fields, depending on the requirements for each message type. Each field description must occur in ascending sequence, and requires a field tag, a field delimiter, a field value, and a final field delimiter, as shown in Table 5–3.

For message content requirements, see the V.I.P. System SingleConnect and SMS technical specifications manuals.

Table 5–3: V.I.P. Import File—Record Data

Field	Position	Length (bytes)	Format[1]	Comments
Field Tag #1	85–varies	varies	AN	See Table 5–6 for field tag types and descriptions.
Field Delimiter	varies	1	AN	Hex “00”
Field Value	varies	varies	UN/AN	These values are found in the V.I.P. System SingleConnect and SMS technical specifications manuals.
Field Delimiter	varies	1	AN	Hex “00”
. . . .	. . . .	. . . .	. . . .	These fields are continuous depending on message types
Field Tag #n	varies	varies	AN	See Table 5–6 for field tag types and descriptions.
Field Delimiter	varies	1	AN	Hex “00”
Field Value	varies	varies	UN/AN	For more information, see the V.I.P. System SingleConnect and SMS technical specifications manuals.
Field Delimiter	varies	1	AN	Hex “00”

[1]UN = unpacked numeric; AN = alphanumeric

Network IDs

The network IDs supported by BOAS are listed in Table 5–4.

Table 5–4: Network IDs (1 of 2)

Network ID	Product
0002	Visa V.I.P.
0003	Interlink
0004	Plus (BASE II)
0004	Plus (V.I.P.)
0006	Cirrus
0007	MasterCard
0008	Cash Station
0009	Money Station
0010	HONOR
0011	MAC
0012	Explore
0013	AFFN-POS
0014	Most
0015	BankMate
0016	MAESTRO
0017	Pulse
0018	Yankee 24/NYCE
0019	Tyme
0020	Accel
0021	Alert

Table 5–4: Network IDs (2 of 2)

Network ID	Product
0022	EFT Illinois
0023	Transfund
0024	Mellon Special
0025	Alaska Option
0026	Gulfnet
0027	Magic Line
0028	ITS (Shazam)
0029	Integrated EBT
0030	Cash Benefit
0040	AMEX
0041	Discover
0042	AFFN-ATM
0043	Diner's Club

Import File Transaction Types

When importing files into the BOAS system, you must include, at a minimum, the required fields for a particular transaction type. The BOAS system identifies the transaction type by its required fields and assigns the appropriate three-digit code.

Table 5–5 lists the transaction types, message types, and minimum fields you need to include for BOAS to process the transaction, and transaction type codes.

Table 5–5: Import File Transaction Types and Required Fields (1 of 3)

Transaction Type	Message Type	Minimum Fields	Code
Chargeback Cash	0422	F3a, F18, F25, F63.1	033
Chargeback Credit	0422	F3a, F18, F25, F63.1	032
Chargeback Reversal–Cash	0422	F3a, F18, F25, F63.1	063
Chargeback Reversal–Credit	0422	F3a, F18, F25, F63.1	062
Chargeback Reversal–Sales	0422	F3a, F18, F25, F63.1	061
Chargeback Sales	0422	F3a, F18, F25, F63.1	031
Credit–Adjustment	0220	F3a, F18, F25, F63.1	121
Credit–Adjustment Chargeback	0422	F3a, F18, F25, F63.1	123
Credit–Adjustment Representment	0220	F3a, F18, F25, F63.1	122
Credit–Cash–Adjustment	0220	F3a, F18, F25, F63.1	124
Credit–Adjustment–No Previous Transaction	0220	F3a, F63.1, F63.3	015
Credit–Cash–Adjustment Chargeback	0422	F3a, F18, F25, F63.1	126

Table 5–5: Import File Transaction Types and Required Fields (2 of 3)

Transaction Type	Message Type	Minimum Fields	Code
Credit–Cash–Adjustment Representment	0220	F3a, F18, F25, F63.1	125
Debit–Adjustment	0220	F3a, F18, F25, F63.1	111
Debit–Adjustment–No Previous Transaction	0220	F3a, F63.1, F63.3	014
Debit–Adjustment Chargeback	0422	F3a, F18, F25, F63.1	113
Debit–Adjustment Representment	0220	F3a, F18, F25, F63.1	112
Debit–Cash–Adjustment	0220	F3a, F18, F25, F63.1	114
Debit–Cash–Adjustment Chargeback	0422 or 220	F3a, F18, F25, F63.1	116
Debit–Cash–Adjustment Representment	0220	F3a, F18, F25, F63.1	115
Exception File Inquiry/Update	0302	F63.1, F101	101
Fee Collection	0422	F3a, F18, F25, F63.1	131
Fraud Advice	9620	F63.1, F70, F125-G1	161
Free Text Message	0600	F33, F63.1,F70, F100	151
Funds Disbursement	0422 or 0220	F3a, F18, F25, F63.1 or F3a, F18, F25	141

Table 5–5: Import File Transaction Types and Required Fields (3 of 3)

Transaction Type	Message Type	Minimum Fields	Code
Inquiry/Response	0600	F33, F63.1, F70, F100	260
Original Sales Draft (Interlink Downtime)	0200	F63.1	011
PIN Verification Value File Inquiry/Update	0302 or 0312	F63.1, F101	102
Representment Cash	0220, 0230, 2082	F3a, F18, F25, F63.1	023
Representment Credit	0220	F3a, F18, F25, F63.1	022
Representment Sales	0220	F3a, F18, F25, F63.1	021
Request for Copy	0600	F63.1, F70	081
Request for Copy–Dispute	0600	F63.1, F70	084
Request for Copy–Nonfulfillment	0600	F63.1, F70	092
Request for Mailing Confirmation	0600	F63.1, F70	091
Request for Original	0600	F63.1, F70	071

Import File Field Tags

Table 5–6 lists identifiers for fields in V.I.P.-formatted data. It does not list the entire set of field codes. For more information, see the V.I.P. System SingleConnect and SMS technical specifications manuals.

Table 5–6: Field Tags (1 of 7)

Field Tag	Field Description
T	Message Type: These include both SMS and file messages 0200, 0220, 0302, 0312, 0422, 0600, 0620
M2	Primary Account Number
M3	Processing Code
M4	Transaction Amount
M5	Settlement Amount
M6	Cardholder Billing Amount
M7	Transmission Date and Time
M9	Settlement Conversion Rate
M10	Cardholder Billing Conversion Rate
M11	Systems Trace Audit Number
M12	Local Transaction Time
M13	Local Transaction Date
M14	Expiration Date
M15	Settlement Date
M16	Conversion Date
M18	Merchant Type
M19	Acquiring Institution Country Code

Table 5–6: Field Tags (2 of 7)

Field Tag	Field Description
M20	PAN Extended Country Code
M21	Forwarding Institution Country Code
M22	POS Entry Mode Code
M23	Card Sequence Number
M25	POS Condition Code
M26	POS PIN Capture Code
M28	Transaction Fee Amount
M32	Acquiring Institution ID Code
M33	Forwarding Institution ID Code
M34	Primary Account Number Extended
M37	Retrieval Reference Number
M38	Authorization ID Response
M39	Response Code
M40	Service Restriction Code
M41	Card Acceptor Terminal ID
M42	Card Acceptor ID Code
M43	Card Acceptor Name/Location
M44	Additional Response Data
M44.11	Original Response Code
M48	Additional Data - Private
M49	Transaction Currency Code
M50	Settlement Currency Code
M51	Cardholder Billing Currency Code

Table 5–6: Field Tags (3 of 7)

Field Tag	Field Description
M52	Personal ID Number (PIN) Data
M53	Security Related Control Information
M59	State, ZIP Code, or both
M60	Additional POS Information
M61.1	Other Transaction Amount
M61.2	Other Cardholder Billing Amount
M62.1	Authorization Characteristics Indicator
M62.2	Transaction Identifier
M62.3	Validation Code
M62.4	Market-Specific Data Identifier
M62.5	Duration
M62.6	Prestigious Property Indicator
M62.7	Purchase Identifier
M62.8	Auto Rental Check-Out Date, Lodging Check-In Date
M62.9	No Show Indicator
M62.10	Extra Charges
M62.11	Multiple Clearing Sequence Number
M62.12	Multiple Clearing Sequence Count
M62.13	Restricted Ticket Indicator
M62.14	Total Amount Authorized
M62.15	Requested Payment Service
M62.16	Chargeback Rights Indicator

Table 5–6: Field Tags (4 of 7)

Field Tag	Field Description
M62.18	Excluded Transaction ID Reason
M63.1	Network ID Code
M63.3	Message Reason Code
M63.4	STIP/Switch Reason Code
M63.6	Chargeback Reduction Flags
M63.7	Network Participation Flags
M63.8	Acquirer Business ID
M63.9	Fraud Reporting Data
M63.10	Gateway Merchant Data
M63.11	Reimbursement Attribute
M63.12	Sharing Group Code
M63.13	Decimal Positions Indicator
M63.14	Issuer Currency Conversion Data
M63.15	Acquirer Currency Conversion Fee Allocation
M63.16	VIEW BIN Number
M63.17	Additional Data Indicator
M63.18	Merchant Volume Indicator
M64	Message Authentication Code
M66	Settlement Code
M68	Receiving Institution Country Code
M69	Settlement Institution Country Code
M70	Network Management Information Code
M73	Action Date

Table 5–6: Field Tags (5 of 7)

Field Tag	Field Description
M74	Number of Credits
M75	Reversal Number of Credits
M76	Number of Debits
M77	Reversal Number of Debits
M86	Amount of Credits
M87	Reversal Amount of Credits
M88	Amount of Debits
M89	Reversal Amount of Debits
M90	Original Data Elements
M91	File Update Code
M92	File Security Code
M93	Response Indicator
M97	Net Settlement Amount
M98	Payee
M99	Settlement Institution ID Code
M100	Receiving Institution ID Code
M101	File Name
M102	Account Identification 1
M103	Account Identification 2
M104	Transaction Description
M115	Additional Trace Data
M119	Settlement Service Data
M123	Address Verification Data

Table 5–6: Field Tags (6 of 7)

Field Tag	Field Description
M125	Supporting Information
M126	Visa Private Use Field
M126.12	Service Development Indicator
M127C.1	PIN Verification Data
M127E.1	Action Code
M127E.2	Region Coding
M127E.3	Cardholder Spending Amount Limit
M127E.4	Cardholder Spending Count Limit
M128	Message Authentication Code
M130	Terminal Capability Profile
M131	Terminal Verification Results
M132	Unpredictable Number
M133	Terminal Serial Number
M134	Visa Discretionary Data
M134.1	Derivation Key Index
M134.2	Cryptogram Version
M134.3	Card Verification Results
M135	Issuer Discretionary Data
M136	Cryptogram
M137	Application Transaction Counter
M138	Application Interchange Profile
M139.1	Authorization Response Cryptogram (ARPC)
M142	Issuer Script

Table 5–6: Field Tags (7 of 7)

Field Tag	Field Description
M143	Issuer Script Results
M144	Cryptogram Transaction Type
M145	Terminal Country Code
M146	Terminal Transaction Date
M147	Cryptogram Amount
M148	Cryptogram Currency Code
M149	Cryptogram Cashback Amount
M192	Message Authentication Code

Processing Export Files 6

Overview

When you set up your Transaction Profile, as described in Chapter 4, you have the option of specifying which transactions you want written to an export file.

When you receive data into the BOAS system, the system searches for the transaction types you have specified for export, creates an export file, and automatically routes these transactions to the file. These export files allow you to transport data from BOAS to your host system or to another external system.

This chapter describes how to format both BASE II and V.I.P. export files.

Formatting Export Files

The DOS export file created automatically by BOAS is named **Eccyyddd.sss**, where:

cc= century
yy = Julian year
ddd = Julian day
sss = sequential number (up to 999 export files allowed per day)

There are two types of export files:

- Those created by the receive function from BASE II
- Those created by the receive function from V.I.P.

Note: *You are responsible for deleting export files from the system, or they are archived to diskettes during normal BOAS archiving.*

Formatting a BASE II Export File

Each BASE II export file is a standard CTF file. Center Transaction Files are sequential, fixed-length files. Each CTF contains one or more logical transactions, each of which is defined by a transaction code (TC) and comprise one or more transaction component records (TCR). Each record is 168 bytes long.

For more details on CTF formats, refer to the *BASE II Clearing & Settlement Interchange Formats*.

The number of batches in an incoming CTF is determined by the VIC. Incoming batches are not sorted and distributed by destination BIN; batches may contain transactions for multiple BINs processed by the same processing center.

Current TC records for exporting files are listed in Table 6–1.

Table 6–1: BASE II Export Transaction Codes (1 of 2)

Transaction Format	Description
TC 05	Sales Draft or Representment
TC 06	Credit Voucher and Representment
TC 07	Cash Disbursement and Representment
TC 10	Fee Collection Transactions
TC 15	Sales Draft Chargeback
TC 16	Credit Voucher Chargeback
TC 17	Cash Disbursement Chargeback
TC 20	Funds Disbursement Transactions
TC 25	Sales Draft Reversal and Representment
TC 26	Credit Voucher Reversal and Representment
TC 27	Cash Disbursement Reversal and Representment
TC 31	ICS Response Transactions
TC 35	Sales Draft Chargeback Reversal
TC 36	Credit Chargeback Reversal
TC 37	Cash Chargeback Reversal
TC 38	Copy Request and Fulfillment Service Message Transactions, Nonfulfillments, and Dispute Requests
TC 50	Text Message Transactions
TC 51	Retrieval Request for Original Paper
TC 52	Retrieval Request for Photocopy or Substitute Draft
TC 53	Confirmation Record for Photocopy or Original Mailing

Table 6–1: BASE II Export Transaction Codes (2 of 2)

Transaction Format	Description
TC 90	File Header Records
TC 91, 92	Batch and File Trailer Records

Formatting a V.I.P. Export File

Each V.I.P. export file record consists of:

- A header of 115 bytes
- Variable length expanded ISO-formatted data (to a maximum of 1143 bytes)

The header format is shown in Table 6–2. The variable length expanded ISO format is shown in Table 6–3. For more information, see the V.I.P. System SingleConnect and SMS technical specifications manuals. Refer to the About This Guide chapter for a list of V.I.P. books.

Table 6–2: Export File Record Header for V.I.P. (1 of 2)

Field	Position	Length	Format[1]	Comments
Control Number	1–3	3	UN	Record key
Message Code	4–7	4	AN	V.I.P. Message Reason Code
Header Amount	8–19	12	UN	Default to zero
Header Amount Decimal Position	20	1	UN	0, 1, 2, or 3
Header Date	21–24	4	UN	Transaction date (MMDD format)
Header Account	25–43	19	AN	Card Account (left-justified, space-filled)
Header Message Text	44–66	23	AN	Merchant name from record or other data
Monetary Transaction	67	1	AN	Y = Monetary transaction N = Nonmonetary transaction
Delete Flag	68	1	AN	Y = Delete this record N = Flag Off (default)
Change Flag	69	1	AN	Y = Record updated N = Flag Off (default) E = Flag error
New Flag	70	1	AN	Y = Record added N = Flag Off (default)

Table 6–2: Export File Record Header for V.I.P. (2 of 2)

Field	Position	Length	Format[1]	Comments
Connection Type	71	1	AN	V = V.I.P.
Network ID	72–75	4	UN	See Table 6–4 for a list of network IDs.
Issuer/Acquirer	76	1	AN	I= Issuer, A= Acquirer
Filler	77–113	37	AN	Spaces
Transaction Type	114–116	3	UN	See Table 6–5 for a list of transaction types.

[1]UN = unpacked numeric; AN = alphanumeric

Variable Length ISO-Formatted Data (V.I.P. only)

The ISO formats for exported V.I.P. data are listed in Table 6–3.

Table 6–3: Export V.I.P. ISO Format

Field	Position	Length (bytes)	Format[1]	Comments
Data Length	116–119	4	UN	The length of the variable data to follow
Field Tag #1[2]	120–varies	varies	AN	See Table 6–7 for field tag types and descriptions.
Field Delimiter	varies	1	Hex “00”	The length of the marker between fields
Field Value	varies	varies	varies	For more information, see the V.I.P. System SingleConnect and SMS technical specifications manuals.
Field Delimiter	varies	1	Hex “00”	The length of the marker between fields
. . . .	. . . .	. . . .	. . . .	These fields are continuous depending on message types
Field Tag #n[2]	varies	varies	AN	See Table 6–7 for field tag types and descriptions.
Field Delimiter	varies	1	Hex “00”	The length of the marker between fields
Field Value	varies	varies	varies	For more information, see the V.I.P. System SingleConnect and SMS technical specifications manuals.
Field Delimiter	varies	1	Hex “00”	The length of the marker between fields

[1]UN = unpacked numeric; AN = alphanumeric

[2]Each field tag must be accompanied by the appropriate field value and associated field delimiters. The field tags are in ascending sequence, that is., M2 . . .M3 . . .M4, and so forth.

Network IDs

The network IDs supported by BOAS are listed in Table 6–4.

Table 6–4: Network IDs (1 of 2)

Network ID	Product
0002	Visa V.I.P.
0003	Interlink
0004	Plus
0006	Cirrus
0007	MasterCard
0008	Cash Station
0009	Money Station
0010	HONOR
0011	MAC
0012	Explore
0013	AFFN-POS
0014	Most
0015	BankMate
0016	MAESTRO
0017	Pulse
0018	Yankee 24/NYCE
0019	Tyme
0020	Accel
0021	Alert
0022	EFT Illinois

Table 6–4: Network IDs (2 of 2)

Network ID	Product
0023	Transfund
0024	Mellon Special
0025	Alaska Option
0026	Gulfnet
0027	Magic Line
0028	ITS (Shazam)
0029	Integrated EBT
0030	Cash Benefit
0040	AMEX
0041	Discover
0042	AFFN-ATM
0043	Diner's Club

The SMS gateway may allow additional values for the network ID. See the Product Selections under the Profile Maintenance screen as described in Chapter 4, Setting Up Your System Profile, for all other currently allowed values.

Export File Transaction Types

All the transaction types supported by BOAS along with transaction type codes and message types are listed, first alphabetically and then numerically, in Table 6–5 and Table 6–6.

For more information, see the V.I.P. System SingleConnect and SMS technical specifications manuals.

Table 6–5: Export File Transaction Types, Alphabetical (1 of 3)

Transaction Type	Code	Message Type
Cardholder Database Update Advice	270	0302
Chargeback Cash	033	0422
Chargeback Credit	032	0422
Chargeback Credit–Status Advice	037	0480
Chargeback Reversal–Cash	063	0422
Chargeback Reversal–Credit	062	0422
Chargeback Reversal–Sales	061	0422
Chargeback Sales	031	0422
Chargeback Sales–Status Advice	035	0480
Credit–Adjustment	121	0220
Credit–Adjustment–No Previous Transaction	015	0220
Credit–Adjustment Chargeback	123	0422
Credit–Adjustment Chargeback Status Advice	234	0480
Credit–Adjustment Representment	122	0220
Credit–Adjustment Representment Status Advice	232	0282
Credit–Cash–Adjustment	124	0220
Credit–Cash–Adjustment Chargeback	126	0422

Table 6–5: Export File Transaction Types, Alphabetical (2 of 3)

Transaction Type	Code	Message Type
Credit–Cash–Adjustment Representment	125	0220
Debit–Adjustment	111	0220
Debit–Adjustment–No Previous Transaction	014	0220
Debit–Adjustment Chargeback	113	0422
Debit–Adjustment Chargeback Status Advice	224	0480
Debit–Adjustment Representment	112	0220
Debit–Adjustment Representment Status Advice	222	0282
Debit–Cash–Adjustment	114	0220
Debit–Cash–Adjustment Chargeback	116	0422
Debit–Cash–Adjustment Representment	115	0220
Fee Collection	131	0220, 0422
Free Text Message	151	0600, 0620
Funds Disbursement	141	0220, 0422
Inquiry/Response	260	0620
Reconciliation Totals	103	0520
Representment Cash	023	0220
Representment Credit	022	0220
Representment Credit–Status Advice	027	0282
Representment Reversal–Cash	053	0420
Representment Reversal–Credit	052	0420
Representment Reversal–Sales	051	0420
Representment Sales	021	0220

Table 6–5: Export File Transaction Types, Alphabetical (3 of 3)

Transaction Type	Code	Message Type
Representment Sales–Status Advice	025	0282
Request for Copy	081	0620
Request for Copy–Dispute Ruling	085	0620
Request for Copy–Nonfulfillment	092	0620
Request for Copy–Status Advice	083	0620
Request for Mailing Confirmation	091	0620
Request for Original	071	0620
Request for Original Status Advice	073	0620
Settlement Totals	104	0620

Table 6–6: Export File Transaction Types, Numerical (1 of 3)

Code	Transaction Type	Message Type
021	Representment Sales	0220
022	Representment Credit	0220
023	Representment Cash	0220
025	Representment Sales–Status Advice	0282
027	Representment Credit–Status Advice	0282
031	Chargeback Sales	0422
032	Chargeback Credit	0422
033	Chargeback Cash	0422
035	Chargeback Sales–Status Advice	0480
037	Chargeback Credit–Status Advice	0480
051	Representment Reversal–Sales	0420
052	Representment Reversal–Credit	0420
053	Representment Reversal–Cash	0420
061	Chargeback Reversal–Sales	0422
062	Chargeback Reversal–Credit	0422
063	Chargeback Reversal–Cash	0422
071	Request for Original	0620
073	Request for Original Status Advice	0620
081	Request for Copy	0620
083	Request for Copy–Status Advice	0620
085	Request for Copy–Dispute Ruling	0620
091	Request for Mailing Confirmation	0620

Table 6–6: Export File Transaction Types, Numerical (2 of 3)

Code	Transaction Type	Message Type
092	Request for Copy–Nonfulfillment	0620
103	Reconciliation Totals	0520
104	Settlement Totals	0620
111	Debit–Adjustment	0220
112	Debit–Adjustment Representment	0220
113	Debit–Adjustment Chargeback	0422
114	Debit–Cash–Adjustment	0220
115	Debit–Cash–Adjustment Representment	0220
116	Debit–Cash–Adjustment Chargeback	0422
121	Credit–Adjustment	0220
122	Credit–Adjustment Representment	0220
123	Credit–Adjustment Chargeback	0422
124	Credit–Cash–Adjustment	0220
125	Credit–Cash–Adjustment Representment	0220
126	Credit–Cash–Adjustment Chargeback	0422
131	Fee Collection	0220, 0422
141	Funds Disbursement	0220, 0422
151	Free Text Message	0600, 0620
222	Debit–Adjustment Representment Status Advice	0282
224	Debit–Adjustment Chargeback Status Advice	0480
232	Credit–Adjustment Representment Status Advice	0282
234	Credit–Adjustment Chargeback Status Advice	0480

Table 6–6: Export File Transaction Types, Numerical (3 of 3)

Code	Transaction Type	Message Type
260	Inquiry/Response	0620
270	Cardholder Database Update Advice	0302

Export File Field Tags

Table 6–7 lists identifiers for fields in V.I.P.-formatted data. It does not list the entire set of field codes. For more information, see the V.I.P. System SingleConnect and SMS technical specifications manuals.

Table 6–7: Field Tags (1 of 7)

Field Tag	Field Description
T	Message Type: These include both SMS and file messages 0200, 0220, 0282 0302, 0312, 0322 0400, 0420, 0422, 0480 0600, 0620
M2	Primary Account Number
M3	Processing Code
M4	Transaction Amount
M5	Settlement Amount
M6	Cardholder Billing Amount
M7	Transmission Date and Time
M9	Settlement Conversion Rate
M10	Cardholder Billing Conversion Rate
M11	Systems Trace Audit Number
M12	Local Transaction Time
M13	Local Transaction Date
M14	Expiration Date
M15	Settlement Date
M16	Conversion Date
M18	Merchant Type
M19	Acquiring Institution Country Code

Table 6–7: Field Tags (2 of 7)

Field Tag	Field Description
M20	PAN Extended Country Code
M21	Forwarding Institution Country Code
M22	POS Entry Mode Code
M23	Card Sequence Number
M25	POS Condition Code
M26	POS PIN Capture Code
M28	Transaction Fee Amount
M32	Acquiring Institution ID Code
M33	Forwarding Institution ID Code
M34	Primary Account Number Extended
M37	Retrieval Reference Number
M38	Authorization ID Response
M39	Response Code
M40	Service Restriction Code
M41	Card Acceptor Terminal ID
M42	Card Acceptor ID Code
M43	Card Acceptor Name/Location
M44	Additional Response Data
M44.11	Original Response Code
M48	Additional Data - Private
M49	Transaction Currency Code
M50	Settlement Currency Code
M51	Cardholder Billing Currency Code

Table 6–7: Field Tags (3 of 7)

Field Tag	Field Description
M52	Personal ID Number (PIN) Data
M53	Security Related Control Information
M59	State, ZIP Code, or both
M60	Additional POS Information
M61.1	Other Transaction Amount
M61.2	Other Cardholder Billing Amount
M62.1	Authorization Characteristics Indicator
M62.2	Transaction Identifier
M62.3	Validation Code
M62.4	Market-Specific Data Identifier
M62.5	Duration
M62.6	Prestigious Property Indicator
M62.7	Purchase Identifier
M62.8	Auto Rental Check-Out Date, Lodging Check-In Date
M62.9	No Show Indicator
M62.10	Extra Charges
M62.11	Multiple Clearing Sequence Number
M62.12	Multiple Clearing Sequence Count
M62.13	Restricted Ticket Indicator
M62.14	Total Amount Authorized
M62.15	Requested Payment Service
M62.16	Chargeback Rights Indicator

Table 6–7: Field Tags (4 of 7)

Field Tag	Field Description
M62.18	Excluded TID Reason
M63.1	Network ID Code
M63.3	Message Reason Code
M63.4	STIP/Switch Reason Code
M63.6	Chargeback Reduction Flags
M63.7	Network Participation Flags
M63.8	Acquirer Business ID
M63.9	Fraud Reporting Data
M63.10	Gateway Merchant Data
M63.11	Reimbursement Attribute
M63.12	Sharing Group Code
M63.13	Decimal Positions Indicator
M63.14	Issuer Currency Conversion Data
M63.15	Acquirer Currency Conversion Fee Allocation
M63.16	VIEW BIN Number
M63.17	Additional Data Indicator
M63.18	Merchant Volume Indicator
M64	Message Authentication Code
M66	Settlement Code
M68	Receiving Institution Country Code
M69	Settlement Institution Country Code
M70	Network Management Information Code
M73	Action Date

Table 6–7: Field Tags (5 of 7)

Field Tag	Field Description
M74	Number of Credits
M75	Reversal Number of Credits
M76	Number of Debits
M77	Reversal Number of Debits
M86	Amount of Credits
M87	Reversal Amount of Credits
M88	Amount of Debits
M89	Reversal Amount of Debits
M90	Original Data Elements
M91	File Update Code
M92	File Security Code
M93	Response Indicator
M97	Net Settlement Amount
M98	Payee
M99	Settlement Institution ID Code
M100	Receiving Institution ID Code
M101	File Name
M102	Account Identification 1
M103	Account Identification 2
M104	Transaction Description
M115	Additional Trace Data
M119	Settlement Service Data
M123	Address Verification Data

Table 6–7: Field Tags (6 of 7)

Field Tag	Field Description
M125	Supporting Information
M126	Visa Private Use Field
M126.12	Service Development Indicator
M127C.1	PIN Verification Data
M127E.1	Action Code
M127E.2	Region Coding
M127E.3	Cardholder Spending Amount Limit
M127E.4	Cardholder Spending Count Limit
M128	Message Authentication Code
M130	Terminal Capability Profile
M131	Terminal Verification Results
M132	Unpredictable Number
M133	Terminal Serial Number
M134	Visa Discretionary Data
M134.1	Derivation Key Index
M134.2	Cryptogram Version
M134.3	Card Verification Results
M135	Issuer Discretionary Data
M136	Cryptogram
M137	Application Transaction Counter
M138	Application Interchange Profile
M139.1	Authorization Response Cryptogram (ARPC)
M142	Issuer Script

Table 6–7: Field Tags (7 of 7)

Field Tag	Field Description
M143	Issuer Script Results
M144	Cryptogram Transaction Type
M145	Terminal Country Code
M146	Terminal Transaction Date
M147	Cryptogram Amount
M148	Cryptogram Currency Code
M149	Cryptogram Cashback Amount
M192	Message Authentication Code

Glossary

acquirer

A member financial institution that has agreements with merchants to accept Visa card transactions, offers cash disbursement services to cardholders, or both. The acquirer is responsible for:

- Accepting card transaction data from merchants and its own ATMs and bank branches.
- Providing authorization decisions to those card-accepting locations.
- Conveying transaction information to Visa as interchange transactions.

acquirer BIN

The Visa identifier (usually a six-digit BIN) for the member or user that acquired a transaction from the card acceptor. This is **not** the Visa identifier (a four-digit identifier) for the acquirer center.

acquirer center

A processing center supporting one or more Visa acquirers. The processing center receives transaction information from merchants and cash dispensing locations on behalf of the acquirer or acquirers; processes local transactions and sends interchange transactions to a VIC for distribution to the issuer processing centers; and settles the value of transactions with merchants or agents and, for interchange transactions, with other members.

action code

The issuer-specified code in an Exception File record that indicates the response to be used or the action to be taken when a stand-in processor processes a request on behalf of an issuer center.

Acquirer Reference Number

A 23-digit identification number associated with every draft, voucher, or both. It consists of an Acquirer Format Code, BASE Identification Number (BIN), Date, Film Locator, and Check Digit.

Address Verification Service (AVS) code

A response code field contained only in BASE II Sales Draft transactions. The code is used to identify supported versus unsupported cardholders for U.S. and international issuers and merchants.

adjustment

A message from an acquirer center to an issuer center informing the issuer that something about a previously processed financial transaction has changed or was wrong. A merchandise return by the customer is one example. Adjustments may be debits or credits, must be approved by the issuer, and are normally intended to appear on cardholder statements.

Adjustments are supported for SMS processing only.

administrative messages

All transactions that pass information between processing centers but do not result in debits or credits in the settlement process.

Advice File

A file containing records of authorization and verification responses generated at the VIC for the card issuer under the rules of the Positive Cardholder Authorization Service (PCAS) or when the issuer center was unavailable.

alternate routing

An optional service that allows an issuer or acquirer center to designate a processor other than its online processor as a destination for its exception transactions, such as chargebacks, representments, and adjustments.

authorization request

The V.I.P. System message, sent from an acquirer center (through the V.I.P. subsystem of the VAP) to Visa, requesting approval of a customer transaction.

authorization code

A five- or six-position code, usually numeric, provided by an issuer or its agent to indicate approval of a transaction. The code is returned in the authorization response message and is usually recorded on the sales or cash draft as proof of authorization.

BackOffice Adjustment System (BOAS)

A PC-based system residing at member sites through which issuer and acquirer centers can process exception transactions, such as adjustments and chargebacks.

BASE II acquirer (center)

From the perspective of SMS processing, an acquirer center linked to the BASE II System at one or more VICs, but not linked to the SMS Switch.

BASE II Bridge

An offline system in the SMS component of the V.I.P. System. It performs the bridge function that handles messages being passed from the SMS centers to the BASE II System, and the reverse bridge function for transactions being passed from BASE II centers to SMS centers.

BASE II issuer (center)

From the perspective of SMS processing, an issuer center linked to the BASE II System at one or more VICs, but not linked to the SMS Switch.

BASE II processing center

A processing center with a communication link to the BASE II System at a VIC, through a VAP, that sends outgoing Interchange Transaction Files to that VIC and receives incoming Interchange Transaction Files. It is responsible for functions related to interchange clearing and settlement for Visa and Plus transactions.

BASE II System

An electronic batch transmission system primarily used for the exchange of Visa interchange transaction data and for settlement of the value of those transactions between acquirers and issuers. This system is also used by centers to retrieve records from the Advice File and by Visa to settle various fees with members.

BASE II transaction

One or more records containing all of the information needed (1) to clear a given customer transaction or (2) to accomplish a given system-supported function. There are BASE II transactions defined for the original submission of customer transactions, for chargebacks and representations, for copy requests and confirmations, for fee collections and funds disbursements, and for a large number of reporting functions.

batch

A set of transaction records accumulated within BOAS and sent to the V.I.P. System.

billing currency

The currency in which the issuer center operates, and the issuer bills its cardholders for transactions. One issuer center may operate in more than one billing currency, but the V.I.P. System only supports one billing currency per BIN.

Also called cardholder billing currency.

BIN

A six-digit system number used by Visa to identify the processing centers and members. BINs are assigned to processing centers operated by members, nonmember processing centers designated by members, the members that operate processing centers, and alias members.

The BIN of a given processing center does not necessarily appear in the cardholder account numbers processed by that center.

BOAS

See BackOffice Adjustment System.

card acceptor

The entity with which the customer is doing business, for example, a merchant, a bank branch, an ATM, or an ADM.

Most commonly, the card acceptor is identified by the merchant ID code assigned by the acquirer. It can also be identified by a BIN assigned by Visa (for example, for a major merchant with its own communication links to VICs).

card issuer

The card issuer is the entity ultimately responsible for approval or denial of any use of a card for purchases and cash withdrawals/advances. When an issuer center or STIP at a VIC provides an authorization decision, it is acting as the issuer's agent.

Card Recovery Bulletin (CRB)

The non-U.S. paper listing, published and distributed by Visa, that contains Visa account numbers for which card pickup is required.

cardholder

This term is used to identify the customer using a card. The cardholder is the person associated with the Primary Account Number; Primary Account Number, Extended; or Account Identification 1 field entry for a given customer transaction.

cash transaction

A customer transaction involving (1) the manual or automated disbursement of cash, (2) a mail/telephone order for travelers cheques or foreign currency, or (3) a quasi-cash purchase.

center

A data processing facility with one or more communication links to one or more VisaNet systems. A single center can function as one or more of the following: a BASE I acquirer center, a BASE I issuer center, a SMS acquirer center, a SMS issuer center.

A center is responsible for authorizing interchange transactions and sending and receiving interchange transaction data to and from a VIC. The center can perform authorization and settlement transaction services for one or more members.

Also known as a processor or a processing center.

center host (computer)

The computer system that operates authorization functions, settlement functions, or both for the processing center, often having online telecommunications links to the VAP for the transmission of V.I.P. and BASE II messages.

In the case of a center having separate computer systems for authorizations and settlement processing, the phrase refers to the system that runs the functions being discussed.

Center Transaction File (CTF)

The outgoing Center Transaction File contains interchange transactions generated by a processing center's pre-edit program. If the format is acceptable to the Edit Package, it is converted to an ITF and is submitted to the VIC.

The incoming Center Transaction File contains ITF data transmitted from the VIC through the VAP to the Edit Package for processing. If there are no errors, the ITF is converted to a CTF and used as input to the post-edit program.

central processing date (CPD)

The date (based on GMT) when the ITF or report in question was generated at a VIC. For any given BASE II processing day, this date is based on the input phase of VIC processing.

chargeback

A sales draft or other item that has been examined by the issuer center, found to be improper, and sent back to the acquirer center with other outgoing interchange.

Chargeback Reduction Service (CRS)

A worldwide service that provides acquirers and issuers with information available from other VisaNet systems to reduce unnecessary chargebacks and representments and to reduce the time needed to research valid chargebacks**.**

chargeback reversal

The cancellation of a chargeback sent in error to the acquirer center.

check digit

A digit added to the end of an account number or Microfilm Reference Number that is derived from a computation using a predetermined formula and the preceding digits of the account number. It is used during editing processes to validate account numbers and Microfilm Reference Numbers.

clearing

All of the functions required to collect a transaction from an acquirer in the merchant's currency and deliver it to the issuer in the cardholder's currency.

copy/original

An original paper or a copy thereof requested from the acquirer center by the issuer center. (Synonymous with original/photocopy.)

CPD

See central processing date.

CRB

See Card Recovery Bulletin.

CRB region

A geographic area that determines where a pickup account number is to be published or placed on file. Identified by region code.

credit transaction

A claim for funds by the cardholder for the credit of his/her account. At the same time, it provides details of funds acknowledged as payable by the acquirer, the card acceptor, or both, to the card issuer.

CRS

See Chargeback Reduction Service.

CTF

See Center Transaction File.

CVV (Card Verification Value)

A three-position check value calculated from the data encoded in the stripe using a secure cryptographic process and the issuer's secret DES (Data Encryption Standard) encoding keys. This value is verified in a security module by the issuer or its agent, and is used to detect alteration of the data encoded on the stripe.

Edit Package

The computer programs supplied by Visa International to processing centers to validate interchange data, produce the file containing all interchange data to be sent from the processing center to Visa, and process the file of incoming transactions received from Visa.

Exception File

The file at the VIC containing account numbers that require special handling by STIP. The file contains issuer-specified codes used by STIP when it acts on behalf of the issuer center. Identical copies of the Exception File are maintained at all VIC locations.

fee collection transaction

A BASE II transaction representing a miscellaneous financial charge assessed by one member or by Visa against another member.

Fee Program Indicator (FPI)

A retain and return field used for BASE II only. The field displays on the Original Inquiry Detail screen, and indicates that all exception items (chargeback, representment) are required to keep the same values as the original.

file header record

A record designating the beginning of a CTF or ITF. It contains the processing center ID, security code, and relevant control information. If supplied on outgoing Edit Package processing, the file header record is used to detect duplicate files.

file trailer record

A record designating the end of a CTF or ITF. It contains count and monetary totals used to control the integrity of file content. A CTF is terminated with one file trailer record, regardless of the number of volumes used to contain the data; an ITF on tape is terminated with a file trailer record at the end of each volume, if multiple volumes are needed.

file update

The addition, change, or deletion of a record in one of the Cardholder Database files or the Merchant Central File.

financial transaction

A customer or center transaction that has debit or credit impact on a cardholder's account.

fraud advice transaction

A BASE II transaction sent by a center to notify Visa of the possible fraudulent use of a card. Sent only with outgoing interchange transactions from the issuer center.

funds disbursement transaction

A BASE II transaction used to transfer monetary credit from one BASE II entity to another or to reverse a fee collection transaction.

gateway

Access to a card program/network other than VisaNet, usually involving the software logic needed to convert message formats, message content, and transmission protocol between VisaNet and the other network.

For example, the SMS gateway to the Plus System allows VisaNet acquirer centers to send requests for Plus transactions to issuer centers attached to the Plus Switch, and allows Plus acquirer centers to send requests for Visa transactions to VisaNet issuer centers.

GMT Date

The current Julian date (year and numeric day of year), set for Greenwich mean time.

GMT

The current Greenwich mean time (24-hour clock).

host computer(s)

The computer system used at the processing center to process BASE II interchange, BASE I inquiries, or both, and other authorization-related messages.

IBM PIN offset

A value used to verify PINs created with the IBM PIN offset method. The offset is a nonsecret value that can be stored without special care. It is the numeric difference between the natural PIN (a mathematical function of the account number, a PIN Key, and various other input data) and the PIN selected by the cardholder or assigned by the issuer. During verification, a natural PIN is generated and is modulus-10 added to the offset. The result is a PIN check value that can be matched to the customer's PIN entry.

incoming interchange

All transactions transmitted from a VIC to a processing center, or the entire process of receiving incoming interchange transaction data from a VIC.

interchange processing

The electronic movement of transaction data between acquirers and issuers.

interchange transaction

Any transaction where the member that signed the cardholder submits transactions through a different processing center than the member that signed the merchant.

Interchange Transaction File (ITF)

The outgoing Interchange Transaction File contains outgoing interchange transactions that successfully pass an Edit Package run. (This file is forwarded to a VIC through the VAP or mail.)

The incoming Interchange Transaction File contains incoming interchange transactions and report records for the BASE II reports generated at a VIC. (This file is received through the VAP or mail from a VIC and is used as input to the Edit Package for incoming interchange processing.)

interface trace number

A six-digit number that allows for future support of a unique cardholder transaction identifier.

Interlink

A card program, owned by Visa, designed to allow cardholders to use the ATM cards issued by their financial institutions to make debit card purchases at participating retail locations. Each card is linked to one or more demand deposit account held by the card issuing institution, and is used with a PIN that is verified as part of the authorization process.

Visa operates a logically separate Interlink settlement function. Interlink member and merchant centers that process Interlink transactions exchange messages through the SMS Switch, using V.I.P. message formats. (Interlink message formats are supported for existing users only.)

interregional transaction

A transaction where the merchant and issuer are not in the same Visa region.

intraregional transaction

A transaction where the merchant and issuer are in the same Visa region but are not in the same country.

issuer

A member financial institution that issues Visa cards to consumers. For a given transaction, the issuer is the institution that issued the card used for that transaction.

issuer center

A processing center performing authorization and cardholder accounting functions for an issuer or issuers. An issuer center provides authorization decisions for both local and interchange transactions, posts cardholder accounts from local draft data and incoming interchange transaction data, and processes cardholder bills.

ITF

See Interchange Transaction File.

Julian date

A date expressed as the day's position in a year rather than in a particular month. The format is YDDD or YYDDD.

MCC

See merchant category code.

member

A financial institution that belongs to Visa.

merchant category code (MCC)

The Visa ID number that identifies the merchant's line of business.

Merchant Mailing File

A file at the VIC containing the names, addresses, and other pertinent information for merchants who receive the Card Recovery Bulletin or Combined Warning Bulletin.

Merchant Mailing File transaction

The BASE II transaction used by processing centers to update the Merchant Master File. It is transmitted from acquirer centers to a VIC.

merchant transaction limit

One type of activity limit. The maximum dollar value permitted for an ATM or point-of-sale transaction. Separate merchant transaction limits are specified by the issuer for ATMs and the point of sale.

nonfinancial transaction

A transaction that does not result in the movement of funds. For example, a request/confirmation of an original or photocopy, free form message, Merchant Mailing File update, data capture advice, and Issuers' Clearinghouse Service inquiry, response, or decline.

on-us transactions

Drafts/vouchers and other items where the member that signed the merchant also signed the cardholder. Also includes transactions where the acquirer and issuer are serviced by the same processing center.

Also referred to as *local transactions*.

original transaction

In the BASE II System, the first presentation of a purchase, credit, or cash advance submitted into interchange.

outgoing interchange

All BASE II transactions transmitted from a member's processing center to a VIC. Both acquirer and issuer centers send outgoing interchange.

Payment Service Indicator

A REPS-specific code in Field 62.1 of an authorization or financial request. A code of Y means the request is submitted as a REPS transaction, and the V.I.P. System employs specific edits to determine if it qualifies. A return code of A means the request meets REPS requirements; a return code of N means the request does not.

PIN (Personal Identification Number)

A secret alphanumeric or numeric code that identifies a cardholder when the PIN is entered at an ATM, ADM, or other electronic point-of-service terminal. In these cases, the PIN is accepted as a substitute for a cardholder's signature.

PIN Verification File

A VIC-resident BASE I or SMS file of account numbers and PIN Verification Values (PVVs) or PIN offset values, maintained by the issuer and used for stand-in PIN verification.

PIN Verification Key Index (PVKI)

A one-digit value identifying one of six possible pairs of PIN Verification Keys. This value is used to determine the pair of keys needed to generate a given PVV and is also one of the inputs to the PVV cryptographic process.

PIN Verification Value (PVV)

A mathematical transformation of the PIN and account number using a cryptographic process, which requires a PVKI and two DES keys (known as PIN Verification Keys or a PVK pair). The PVV is a nonsecret value that can safely be stored in a file or encoded on a card without special security measures. It is used to verify that the PIN entered by the customer is in fact the correct PIN for the account.

Plus, Plus Program, Plus System

A membership organization of financial institutions that provides the operating rules, standards, service marks, network services, and administrative support needed to enable national and international sharing of ATMs.

PMC ID (Proprietary Member Center ID)

An identifier assigned by Plus System, Inc. to its users.

POS (point of service; point of sale)

POS can stand for either point of service or point of sale. The intent of both phrases is the same: the place where the customer and card acceptor are located at the time a card (or check) is used for purchase or cash. The term point of transaction is also used for this location.

presentation

See presentment.

presentment

Paper (or a transaction) submitted for the first time by an acquirer to an issuer and processed through VisaNet interchange.

PVKI

See PIN Verification Key Index.

PVV

See PIN Verification Value.

region code

The code for a CRB region.

reimbursement attribute

A one-digit alphanumeric code designating reimbursement fees applicable to a specific transaction.

reimbursement fee

Amount paid by one member to another (usually by the acquirer to the issuer), and can vary according to market requirements.

rejected batch

An interchange batch that is not accepted by the VIC due to an error in the audit integrity of that batch.

rejected transaction

An outgoing BASE II transaction record in which the Edit Package detected an error that affects the financial integrity of the batch. The Edit Package excludes such transactions from outgoing interchange, that is, the transaction is *not* included in the outgoing Interchange Transaction File forwarded to a VIC. (The batch is not rejected; all valid transactions in the batch are included in the outgoing Interchange Transaction File.) Unless the transaction is a batch or file trailer record, the run aborts.

Relationship Participant Indicator

An indicator used to identify a recurring payment transaction that assures issuers that acquirers are complying with operational criteria established by Visa. Applies only to U.S.-acquired Visa authorization and clearing messages.

representation

See representment.

representment

Paper (or a transaction) submitted by an acquirer to an issuer a second time, following receipt of a chargeback.

representment advice

When it is necessary to distinguish between a representment that gets traditional processing and a representment that is subject to CRS processing, the traditional representment is referred to as a representment advice. Note that this distinction applies most to the acquirer center.

request for copy or original transaction

A transaction generated when an issuer requests the original or a copy of the original transaction. Also known as a documentation or media request.

returned item

A BASE II transaction sent back to the initiating member because errors were detected at the VIC.

returned transaction

A cardholder transaction record in which the VIC edit function detected an error that does not violate the financial integrity of the batch. When such an error is detected, the transaction is included in the outgoing batch interchange totals (in a separate category), but it is not forwarded to the issuer center. The transaction is placed in a new BASE II transaction, with a new transaction code, and returned to the originating center with incoming interchange. (On the incoming reports for an originating center, the transactions appear in both outgoing and incoming totals.)

reversal

A transaction used to negate or cancel a transaction that has been sent through interchange in error.

settlement

The actual transfer of funds from the issuing bank to the acquiring bank through a wire transfer to a settlement account, and the total amount owed by one Visa member to another.

settlement currency

The currency used by the BASE II System to calculate a processing center's daily net settlement position.

single-message processing

A method of simultaneously authorizing and clearing a transaction using a single-message that carries all information needed to post a transaction to an account and to enable clearing and settlement.

Single Message Service (SMS)

The system functions that support one-step processing, that includes the authorization, clearing and settlement of a customer transaction with a single financial request message and the online, realtime processing of all follow-up messages for chargeback, representation, copy request, and copy confirmation.

Also, the system functions that support the authorization-only processing for two-step processing. These functions process authorization requests according to SMS rules, that is, assuming that all requests are routed to the issuer center if possible, that STIP activity checks are done using SMS activity limits, and that advices are created for all stand-in authorization.

SMS

See Single Message Service.

Split/Merge

An SMS issuer may also split the routing of its incoming requests based on the type of customer transaction, POS versus ATM. All of its POS transactions go to one issuer center; all of its ATM transactions go to another issuer center.

Stand-In Processor

See STIP.

STIP (Stand-In Processor)

The function which makes authorization decisions for authorization and financial requests on behalf of SMS issuers and issuer centers. It acts only when the issuer center is unavailable or a request has timed out.

Stand-in service is based on the issuer's parameters (in the SMS System Globals), cardholder information maintained by the issuers (in the Exception File), and activity maintained by SMS STIP (in the Activity File). STIP generates advice records for all financial requests it processes.

TCR

See Transaction Component Record.

text message

An unformatted message exchanged between processing centers, or sent by Visa, through the BASE II System.

transaction

BASE II transaction—The records that make up a single financial, administrative, or text message, as required for transmission between a processing center and a VIC. BASE II transactions are identified by transaction codes.

cardholder transaction—The use of a card by a customer (normally assumed to be the cardholder) to purchase goods or services from a merchant or secure cash from an ATM or financial institution.

Transaction Component Record (TCR)

A fixed-length record used to contain a component portion of a BASE II transaction. A single BASE II transaction may consist of multiple TCRs.

transaction component sequence number

A single digit placed in each TCR so multiple records (TCRs) can be combined into a single BASE II transaction in the future. Up to ten components with numbers from 0 through 9 are supported.

transaction currency

The currency of the purchase, as agreed to by the cardholder and the merchant.

Transaction Identifier

This is a unique number assigned by Visa to Visa card transactions during their authorization phase. The number stays with the transaction throughout its clearing and settlement life cycle. It is also inserted in all subsequent messages and records related to the transaction (for example, chargebacks, reversals).

Transponder Indicator

A code carried in authorization and clearing messages to identify transactions that use radio frequency devices to exchange information in certain attended and unattended terminal environments, such as automated fuel dispensers (AFD) and bridge toll booths. Its use is required in authorization messages, original transactions, and original adjustments for risk management purposes to support the tracking and analysis of these types of transactions.

VCRFS

See VisaNet Copy Request and Fulfillment Service.

VisaNet Access Point (VAP)

A point at which the VisaNet network is accessed electronically by a processing center. A VAP is in direct communication with a VIC.

VIC

See VisaNet Interchange Center.

V.I.P. System

An electronic data transmission system for the real-time delivery and processing of messages related to authorization of bank, T&E, private label, and proprietary card and check acceptance transactions. It accepts authorization requests from acquirer authorization centers and either provides authorization decisions or secures authorization decisions from the issuer authorization centers.

VisaNet

The data processing systems, networks, and operations used to support and deliver:

- Authorization services.
- Clearing and settlement services.
- Risk management services.
- Information services.

VisaNet Copy Request and Fulfillment Service (VCRFS)

An automated service where copy requests and fulfillments are sent and received on a CRM workstation or a fax machine while fulfillments are electronically delivered to members through VisaNet using BASE II.

VisaNet Interchange Center (VIC)

The computer hardware systems, software systems, and telecommunication facilities operated by Visa to support authorization and settlement services. All acquirer and issuer centers access a VIC to use the central switch function, and all issuers may elect to use the available stand-in processing functions.

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