

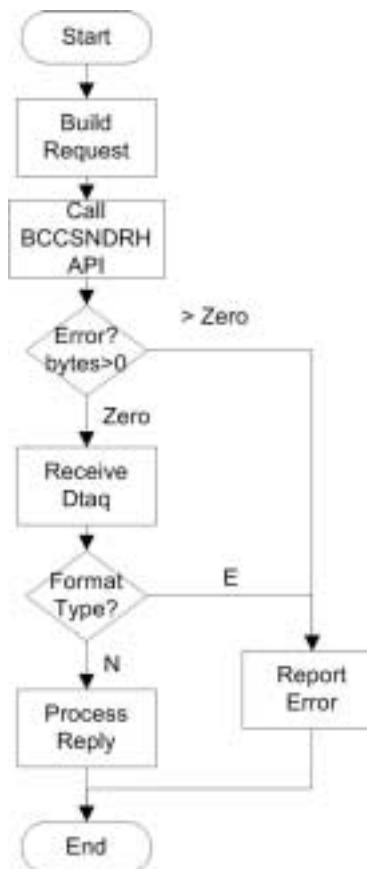
APPLICATION PROGRAM INTERFACES

Application programs access Credit Card/400 functions by using a set of Application Program Interfaces. This section describes the Application Program Interfaces (APIs) provided by Credit Card/400. The parameter lists and parameter values are provided. For an example showing programs calling the APIs, see Chapter 4, “Programming”.

Send to Remote Host (BCCSNDRH) API

The **BCCSNDRH** API allows the user program to communicate with a Credit Card/400 Remote Host. The application builds a request (Authorization, Reversal, etc.) and passes parameters to the API. The Remote Host checks the request, communicates with the Gateway, and places a response in the data queue specified by the application. The application checks a return area to verify no problems calling the API, then receives the specified data queue’s data to receive Reply information from the Remote Host. The amount of time to wait depends on the request, and is usually dictated by the Gateway’s specifications.

The Reply information from the Remote Host may be a Message ID and message data or a Record Format name and data. The application must be able to process both. Figure 5-1 shows a typical application program flow chart.



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Figure 5-1 Application calling **BCCSNDRH** API

BCCSNDRH Parameters

Number	Type	Len	Description
1	Char	10	(Input) Remote Host Name
2	Structure	*	(Input) Input Data
3	Structure	*	(Input & Output) Return Data

Input Data Layout

Pos	Type	Len	Description
1	Char	10	BDS Merchant ID
11	Char	16	User Transaction Sequence Num
27	Char	10	Reply Data Queue Name
37	Char	10	Reply Data Queue Lib
47	Char	10	Send Format Name
57	Char	1	Send Chain Indicator
58	Zoned	5,0	Send Data Length
59	Structure	*	Send Data

Remote Host Name

Specifies the Remote Host to use. The Remote Host must be active.

BDS Merchant ID

Specifies the Merchant ID to use. The Merchant ID must have been defined.

User Transaction Sequence Number

Specifies a user-defined identifier, allowing the application to match several responses received from the Remote Host to their corresponding requests. Credit Card/400 will not use this information.

Reply Data Queue Name and Lib

Specifies the data queue the application wants the reply to be sent. The data queue must exist.

Send Format Name

Specifies the type of request (and format of data) being passed to the Remote Host. See Chapter 4, "Programming" for a description of each format. Specify one of the following:

- AURQ** An Authorization request is being sent.
- AURV** A Reversal is being sent.
- DCBAT** A Data Collection Batch (settlement) request is being sent.

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Send Chain Indicator

Instructs the Remote Host to wait 2 seconds for more data when sampling its input data queue. Due to multiprogramming issues the Remote Host may not receive all sent data before initiating a transaction with the gateway, even though the application sent the data requests with no delay. Specify one of the following:

- Y** The Remote Host will wait up to 2 seconds for more data after receiving this record.
- N** There will be no wait for data after receiving this data.

Send Data Length

Specifies the length of the data in the Send Data field, including any optional data formats.

Send Data

Contains the data described by the Send Format Name. Any additional data should be appended to the end of the specified format.

Reply Data Layout

Pos	Type	Len	Description
1	Char	16	User Transaction Sequence Num
17	Char	1	Error/Record Format Indicator
18	Char	10	Message ID or Format Name
28	Zoned	5,0	Reply Data Length
33	Char	*	Reply Data

Field Values

User Transaction Sequence Number

Specifies a user defined identifier, allowing the application to match several responses received from the Remote Host to their corresponding requests. Credit Card/400 will not use this information.

Error/Record Format Indicator

Specifies if the reply data is an error or a record format. One of the following will be returned:

- E** The Reply is an error message and its data.
- N** The Reply is a record format name and its data

Message ID or Format Name

Specifies a message ID or Format Name. Refer to Message File BDSMSG for a list of messages. Record formats can be one of the following. Refer to Chapter 4, "Programming" for a description of each format:

- AUSN** Authorization Normal Response
- AUSE** Authorization Error Response

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DCRG	DC Batch Good Response
DCRD	DC Batch Duplicate Batch Response
DCRR	DC Batch Rejected Batch Response

Reply Data Length

Specifies the length of the Reply Data.

Reply Data

Specifies the message data for an error or the data for a record format.

Return Data Layout

See “Return Data Layout” below.

Build DC (Settlement) Batch File (BCCBLDDC) API

The **BCCBLDDC** API builds a Data Collection (Settlement) Batch file. It reads Authorization Transactions (Authorization Requests, Reversals) placed in the Authorization Transactions file **BCCAUTR** and writes out transaction records to a user created file. The created file will be referred to by a subsequent **DCBAT** request to the Remote Host via the **BCCSNDRH** API.

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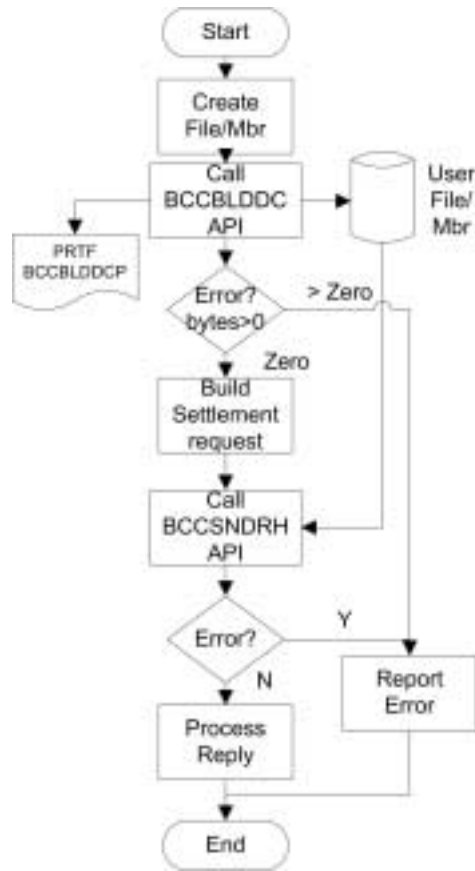


Figure 5-2. Application Processing a Settlement File

The user file can be a physical file or source physical file. Its record length must be large enough to hold all record formats, including additional data formats on the detail record. For most installations, a record length of 200 is OK. The maximum size record length Credit Card/400 can process is 4096. The file and member must exist. The API prior to any processing will clear the member.

Once the User file is created successfully, the API will remove the corresponding records from the Authorization Transaction file (**BCCTRAU**).

The list below shows the order of the records placed into the user file. The file supplied by Credit Card/400 that contains the record layout is also shown. Refer to Chapter 4, “Programming” for more information. You may also refer to the gateway’s documentation for more information on the content of a Data Collection (Settlement) Batch file.

BDS Header1	BCCDCBH1
Header Record	BCCDCBH
Parameter Record	BCCDCBP
Detail Records	BCCDCBD
Trailer Record	BCCDCBT

The API also generates a report, using print file **BCCBLDDCP**, listing the contents of each record

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written to the user file.

BCCBLDDC Parameters

Num	Type	Len	Description
1	Structure	*	(Input) Header Record Type/Data
2	Structure	*	(Input) Record Selection
3	Structure	30	(Input) User Output file name
4	Zoned	3,0	(Output) Batch number
5	Structure	*	(Input & Output) Return Data

Header Record/Type Data

Gateways allow additional optional record formats to be appended to the base header format. The application can pass the Record Type and additional formats to the API.

Pos	Type	Len	Description
1	Char	10	Record Type
11	Zoned	5,0	Additional Data Length
16	Char	*	Additional Data

Record Type

Specifies the Record Type filed to place into the header record (**BHRCDTYP**). Refer to the Gateway documentation to calculate the value. Please note that the process can become complex if several optional formats are added.

Additional Data length

Specifies the length of the optional record formats to append to the end of the base header format.

Additional Data

The optional record formats to append to the end of the base header format.

Note: To send the default header record (with no additional formats), the Header Record Type/Data field will contain:

H@@@00000

Record Selection

Allows the application to specify a subset of all the records in the Authorization Transaction file **BCCTRAU** for processing. Please note that a unique Remote Host/Merchant ID must be specified..

Pos	Type	Len	Description
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1	Char	10	Remote Host Name
11	Char	10	BDS Merchant ID
21	Zoned	14,0	Starting Timestamp (YYYYMMDDHHMMSS)
35	Zoned	14,0	Ending Timestamp (YYYYMMDDHHMMSS)

Remote Host Name

Specifies the Remote Host Name. Only transaction records with a matching Remote Host name will be processed.

BDS Merchant ID

Specifies the BDS Merchant ID. Only transaction records with a matching BDS merchant ID will be processed.

Starting and Ending Timestamp

Specifies the timestamp range to include. The Authorized date and time (**TAAUDATE** and **TAAUTIME** fields) in file **BCCTRAU** are compared to the input values. Records within the range, inclusive, will be selected.

(Zeros): Starting Timestamp all zeros specifies no starting date test.

(Nines): Ending Timestamp all nines specifies no ending date test.

Note: The Local Transaction Date and time, returned in the Normal Response (**AUSN** format) from the Authorization Request (**AURQ**) is used to build the **TRAUDATE** and **TRAUTIME** fields. This is so any Reversals made at a later time will always be included with the Authorization Request.

Note: The timestamp should be only used to split up batches that are too large. If splitting the batch is occurring often, the application should send smaller batches more often.

User Output File name

Specifies the name of the file to write the output records. The file must exist. The member must exist.

Pos	Type	Len	Description
1	Char	10	File name
11	Char	10	Library Name
21	Char	10	Member Name

Batch Number

Returns the Batch Number used when the batch was created. The API queries the Remote Host to retrieve a unique batch number.

Return Data

See "Return Data Layout" below.

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Return Data Layout

Credit Card/400 has standardized the Return Data function of its APIs. The Return Data Layout is similar to IBM's API **ERRC0100** format, except that we do not allow the 0 Bytes provided option.

Return Data Layout

Pos	Type	Len	Description
1	Bin	4	(Input) Bytes Provided
5	Bin	4	(Output) Bytes Available
9	Char	7	(Output) Message ID
16	Char	1	Unused
17	Char	*	(Output) Message Data

Note:

Bytes Provided

Specifies the length of the return data, including this field. The parameter must be in the range of 256 to 1024.

Bytes Available

Specifies the length of data returned in the Message area (Message ID thru Message Data).

0: No error data is returned. The request was accepted by the API and passed to the Remote Host.

>0: An error occurred. Refer to the message ID and message data to determine the exact error.

Message ID

Specifies the message ID. Refer to Message File **BCCMSG** for a list of messages.

Message Data

Specifies the message data returned with the message.