SAF EDIT

SAF EDIT command is used to edit the SAF records in the SAF database. There are two scenarios to edit the SAF records:

- It is used to change the SAF status of PREAUTH, DECLINED and NOT_PROCESSED records to ELIGIBLE status.
- It is used to update the transaction amount for Pre-auth transaction(s).

Application would not modify a SAF record which is in PROCESSED/ DEFERRED status.
POS would send SAF EDIT request with the SAF number (SAF_NUM) for single transaction record or the range of SAF records (using SAF_NUM_BEGIN and SAF_NUM_END) to be updated with SET_SAF_STATUS set to ELIGIBLE. In case of a PREAUTH record, SET_TRANS_AMOUNT field can be included to update the transaction amount of the record. Once the connection to the host is restored, the application will post the updated SAF record to the gateway. While updating a range of SAF records, if only few records in the range are editable, then the POS returns the response as “X SAF RECORD(S) UPDATED” (X means the number of SAF record). Refer to Editing Multiple Transactions sample for more details on response.

Note

- SAF transactions with DECLINED and NOT_PROCESSED status can be edited to ELIGIBLE, if the number of retries do not exceed the value set in MAXSAFRETRY parameter (default: 3 times).
- Marking a SAF Record as ELIGIBLE is not a confirmation to the user that the transaction will be processed successfully. It is completely dependent on the Gateway or the End Processor to decide over the final result of the transaction. It is recommended to perform a SAF QUERY to identify the latest status of the SAF records.

Device UI Required: No

Request Packet

Field	Rule	Type	Minimum	Maximum	Value(s)	Description
FUNCTION_TYPE	Required	Static value			SAF	Type of function
COMMAND	Required	Static value			EDIT	Command name

Field	Rule	Type	Minimum	Maximum	Value(s)	Description
SAF_NUM	Character	Numeric	1	4		SAF record number. This is used to specify single transaction record only. This is required, if SAF_NUM_BEGIN and END are not specified. **Example:** 1235
SET_SAF_STATUS	Optional	Static value			Valid value: ELIGIBLE - Queued / waiting to be processed.	This field is sent to set SAF transaction(s) status as ELIGIBLE. SAF transactions with DECLINED and NOT_PROCESSED status from the SAF database, can be edited to ELIGIBLE, if the number of retries do not exceed the value set in MAXSAFRETRY parameter (default: 3 times).
SET_TRANS_AMOUNT	Optional	Floating point numnber	1(2)	5(2)		This transaction amount is sent, in case of single SAF record. This field will be honoured only while updating the Pre-Auth Transaction. For other transactions, SCA will not update this amount. **Example:** 5.00
SAF_NUM_BEGIN	Optional	Numeric	1	4		Used together with SAF_NUM_END to specify range of SAF records. SAF_NUM range >1 record is only applicable to status change. **Example:** 1236
SAF_NUM_END	Optional	Numeric	1	4		Used together with SAF_NUM_BEGIN to specify range of SAF records. If not specified, edits from SAF_NUM_BEGIN to end of records (3.1.67 and higher) SAF_NUM range >1 record is only applicable to status change. **Example:** 1237

Field	Rule	Type	Minimum	Maximum	Value(s)	Description
COUNTER	Required	Numeric	1	10		COUNTER is used for a given MAC label. Each COUNTER should be higher than the last one. Used to authenticate the POS. **Example:** 100
MAC	Required	Base64 Encoded Data				Message Authentication Code. Used to authenticate the POS.
MAC_LABEL	Required	Character	1	50		Associated label that tells the device which MAC_KEY to use to decrypt the value of MAC. Used to authenticate the POS. **Example:** REG1

Example

Following is an example of request packet

```
<TRANSACTION>
    <FUNCTION_TYPE>SAF</FUNCTION_TYPE>
    <COMMAND>EDIT</COMMAND>
    <SAF_NUM>0001</SAF_NUM>
    <SET_SAF_STATUS>ELIGIBLE</SET_SAF_STATUS>
    <SET_TRANS_AMOUNT>5.00</SET_TRANS_AMOUNT>
    <COUNTER>1</COUNTER>
    <MAC> … </MAC>
    <MAC_LABEL>REG2</MAC_LABEL>
</TRANSACTION>
```

Response Packet

Field	Type	Value	Description
RESPONSE_TEXT	Character		Processor response text. **Example:** SUCCESS
RESULT	Character		This indicates the Result details. **Example:** OK
RESULT_CODE	Numeric	Expected result code: -1, 59053, 59046, 59047, 59048, 59040	This indicates the result code. Refer to Result/Error Codes for more details.
TERMINATION_STATUS	Character	SUCCESS or FAILURE	This indicates the transaction termination status. This is the overall status of the transaction irrespective of approved or declined. Like, if the output is generated then the status is SUCCESS and if no output is generated then the status will be FAILURE.

Field	Type	Value	Description
POS_RECON	Character		POS reconciliation field echoed back if sent in request. **Example:** RetailPOS1
COUNTER	Numeric		Echoes COUNTER sent in the request. **Example:** 100

Transaction Performance Metric

Note

These fields are returned, if SCAPERFMETRIC parameter (Application Parameters) is enabled.

Field	Type Value	Description
UI_TIME	Time	This indicates the time duration, for which the device screen is displayed (like error message, prompt screen, remove card screen) till any user action is performed in the command execution flow. This field is not applicable to capture the time for the Processing, Authorizing and transaction status screen. The format of the returned value would be S.sss, where S is seconds (this can be 0 to any positive integer) and sss is milliseconds. In case of any insignificant time or 0.000 value, will not be returned in the response. **Example:** `<UI_TIME>44.028</UI_TIME>`
HOST_TIME	Time	This indicates the time taken for the Connection to the host, sending request and receives data from the host. This field also take the cumulative time for multiple requests which may sent to the host during the transaction including two legged transactions, timeout requests, Auto Last Tran requests, DCC, Credit app proxy. The format of the returned value would be S.sss, where S is seconds (this can be 0 to any positive integer) and sss is milliseconds. In case of any insignificant time or 0.000 value, will not be returned in the response. **Example:** `<HOST_TIME>1.389</HOST_TIME>`
CMD_TIME	Time	This field indicates the total amount of time for a command, which is executed by the application from request received to the response sent. The format of the returned value would be S.sss, where S is seconds (this can be 0 to any positive integer) and sss is milliseconds. In case of any insignificant time or 0.000 value, will not be returned in the response. **Example:** `<CMD_TIME>70.765</CMD_TIME>`

Example

```
<TRANSACTION>
<FUNCTION_TYPE>SAF</FUNCTION_TYPE>
<COMMAND>EDIT</COMMAND>
<SAF_NUM>0001</SAF_NUM>
<SET_SAF_STATUS>ELIGIBLE</SET_SAF_STATUS>
<SET_TRANS_AMOUNT>5.00</SET_TRANS_AMOUNT>
<COUNTER>1</COUNTER>
<MAC> … </MAC>
<MAC_LABEL>REG2</MAC_LABEL>
</TRANSACTION>
```

If the transaction is already processed or Maximum number of EDIT exceeded:

```
<TRANSACTION>
<FUNCTION_TYPE>SAF</FUNCTION_TYPE>
<COMMAND>EDIT</COMMAND>
<SAF_NUM>0017</SAF_NUM>
<SET_SAF_STATUS>ELIGIBLE</SET_SAF_STATUS>
<MAC_LABEL>P_UWSQPX</MAC_LABEL>
<COUNTER>58</COUNTER>
<MAC>I1XaWqAELXO5Wbi2CZ/dXxcAX4h04u3WiT8jwme88Gg=</MAC>
</TRANSACTION>
```

When a Transaction with particular SAF_NUM is not present in device:

```
<TRANSACTION>
<FUNCTION_TYPE>SAF</FUNCTION_TYPE>
<COMMAND>EDIT</COMMAND>
<SAF_NUM>0019</SAF_NUM>
<SET_SAF_STATUS>ELIGIBLE</SET_SAF_STATUS>
<MAC_LABEL>P_UWSQPX</MAC_LABEL>
<COUNTER>59</COUNTER> <MAC>VfJk40oDKtPJdxkEpXVYMl3a3DR1m7f64maNT6MLJlk=</MAC>
</TRANSACTION>
```

Editing Multiple transactions using SAF Edit:

<TRANSACTION>
<FUNCTION_TYPE>SAF</FUNCTION_TYPE>
<COMMAND>EDIT</COMMAND>
<SET_SAF_STATUS>ELIGIBLE</SET_SAF_STATUS>
<SAF_NUM_BEGIN>25</SAF_NUM_BEGIN>
<SAF_NUM_END>29</SAF_NUM_END>
<MAC_LABEL>P_0HNIMC</MAC_LABEL>
<COUNTER>46</COUNTER>
<MAC>hymEGwd4lkxfRzrsGv0316lAKsn/qhvzEO//Rsuqhus=</MAC>
</TRANSACTION>