



FORTIFIED BENTURE CO.LTD

FEFT WEB-SERVICE DOCUMENT

**Fortified Payments Gateway
Till Integration Interface
Web Services Interface Specifications
Version 5.1**

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Introduction

Till Integration API is a web service that runs on the POS software at the lane in a retail outlet. It presents a simple API to the Till Software running on the same machine. The Till Integration service manages the Pin Pad, sending transactions and receiving responses to and from the payment gateway.

1. Scope

This document defines the Till Integration interface for till systems to run POS financial transactions.

The document defines the content of and rules according to which requests and responses are transmitted between Till Integration and a till system. Message content is defined in terms of the data elements (or fields) which compose messages. Rules for the request and response exchanges are defined in terms of the flows or sequences of messages transmitted between the till system and Till Integration.

2. General

The Fortified Till Integration interface is a web service interface. The message flows and contents are described by this document.

3. HTTP Server

The Till Integration program hosts an HTTP server, defaulting to <http://localhost:6120/>. The port can be changed in a settings file. The management console for the till also runs on this server.

4. POS interface

This is a web service which can be called from the POS software once a transaction tender request has been made by the cashier.

5. Echo test

To test the readiness and availability of left service to accept requests

Parameter	Description
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URL	http://localhost:6120/feft/echotest			
HTTP Method	GET			
Request	No data required			
Response	Element	Format		Description
	RespCode	N3	O	Response Code
	Msg	Text	O	Response Message representing the response code
	Example: <pre>{ "msg": "Echo test successful", "respCode": "800" }</pre>			

6. Sale Transaction

A Sale transaction is called by the till software in order to run a sale through the system. The Till Integration software will manage the communication to the payment gateway.

HTTP

Parameter	Description
URL	http://localhost:6120/feft/sale
HTTP Method	POST

Request

Request for Card Present Scenario

Element	Format		Description
TransKey	An32	M	Unique transaction key assigned by the till system that will refer to the transaction
ProviderCode	An32	M	Provider Code, used to indicate which PIN Pad to activate or which mobile provider is referred is providing mobile payment
Amount	N12	M	Purchase Amount
CashBack	N12	M	Cash Back Amount of the transaction
TillNO	An15	M	Till ID
CashierId	An15	M	Cashier Id

Example:

{“TransKey”:”TillKey0000007676”, ”Bank”:”1”, “Amount”:“500”,
“CashBack”:”0”, “TillNO”: “LBR02”, “CashierId”: “LBR02”}

For multiple pin pads: ProviderCode 1=KCB Bank, ProviderCode 2= Equity Bank, ProviderCode 3= ABSA Bank

For other codes refer to note no 10.

Request for Mobile Payments

Element	Format		Description
TransKey	An32	M	Unique transaction key assigned by the till system that will refer to the transaction
ProviderCode	An32	M	Provider Code, used to indicate which PIN Pad to activate or which mobile provider is referred is providing mobile payment
Amount	N12	M	Purchase Amount
CashBack	N12	M	Cash Back Amount of the transaction
TillNO	An15	M	Till ID
CashierId	An15	M	Cashier Id
MobileID	An15	M	Customer MobileID

Example:

```
{“TransKey”:”TillKey0000007676”, ”ProviderID”:”4”, “Amount”:“500”,
“CashBack”:”0”, “TillNO”: “LBR02”, “CashierId”: “LBR02”,
“MobileID”: “254729566878”}
```

For MPESA request : ProvideCode=4

For Eazzypay Request: ProvideCode =5

For AirtelMoney: ProvideCode 6

For TelkomCash: ProvideCode 7

For other codes refer to note no 10.

Response

Element	Format		Description
amount	N12	M	Amount
respCode	N3	M	Response Code
msg	Text	M	Response Message representing the response code
rrn	An12	M	Retrieval Reference Number
Pan	Text	M	Masked card number
cardExpiry	Text	M	Card Expiry Date
cashBack	N12	M	Approved transaction Cash Back Amount
currency	N3	M	Currency of transaction
tid	An8	M	Terminal ID
mid	An15	M	Merchant ID
invoiceNo	An 15	M	Card Counter No
paymentDetails	Text	M	Card Holders Name
TransactionType	Text	M	Always Sale

Sign	Boolean	M	Indicates whether signature is required
Pin	Boolean	M	Indicates whether pin verification is required
Slip	Text	M	The Sale transaction Slip
authCode	N6	M	Authorization Code
Example: Response from pin pads <pre> { "amount": "500", "authCode": "284481", "cardExpiry": "2104", "cashBack": null, "currency": "404", "invoiceNo": null, "mid": "", "msg": "Succesfully", "pan": "453177xxxxxx6488", "paymentDetails": "VISA", "pin": "true", "respCode": "00", "rrn": "000663035575", "sign": "", "slip": " KCB TEST 1\u000d\u000a NAIROBI, KENYA\u000d\u000aTID: 14150026\u000d\u000aMID: 14150026\u000d\u000a Receipt 1\u000d\u000a PURCHASE\u000d\u000a Approved\u000d\u000a \u000d\u000a \u000d\u000a \u000d\u000aAmount: 1.00 KSH\u000d\u000aAID: A00000000310100010\u000d\u000a VISA DEBIT\u000d\u000aCHQ\u000d\u000aTVR: 0080008000 TSI: FC00\u000d\u000aCID: 40 040739AEC5767704\u000d\u000aISR: 2005000000\u000d\u000aCard: VISA\u000d\u000a 453177*****6488:00\u000d\u000a04\21\u000d\u000a \u000d\u000a VISA FLAG DEBIT CARD\u000d\u000a EMV ICC 453177*****6488:00\u000d\u000a \u000d\u000a \u000d\u000aARRN: 000663035575\u000d\u000aAUTH CODE: 284481\u000d\u000aResponse code (host): 00\u000d\u000aDate (host): 20\08\20 23:56:44\u000d\u000aDate (terminal): 20\08\20 23:56:44\u000d\u000aentered offline-PIN\u000d\u000a \u000d\u000a \u000d\u000a MERCHANT COPY\u000d\u000a ver.:Univ. EMV POS 1.0.0\TITP\u000d\u000a 1.0\671\u000d\u000a Entered offline-PIN\u000d\u000a_____ \u000d\u000a THANK YOU\u000d\u000a===== \u000d\u000a KCB TEST 1\u000d\u000a NAIROBI, KENYA\u000d\u000aTID: 14150026\u000d\u000aMID: 14150026\u000d\u000a Receipt 1\u000d\u000a PURCHASE\u000d\u000a Approved\u000d\u000a \u000d\u000a \u000d\u000a \u000d\u000aAmount: 1.00 KSH\u000d\u000aAID: A00000000310100010\u000d\u000a VISA DEBIT\u000d\u000aCHQ\u000d\u000aTVR: 0080008000 TSI: FC00\u000d\u000aCID: 40 040739AEC5767704\u000d\u000aISR: 2005000000\u000d\u000aCard: VISA\u000d\u000a 453177*****6488:00\u000d\u000a04\21\u000d\u000a \u000d\u000a VISA FLAG DEBIT CARD\u000d\u000a EMV ICC 453177*****6488:00\u000d\u000a \u000d\u000a \u000d\u000aARRN: 000663035575\u000d\u000aAUTH CODE: 284481\u000d\u000aResponse code (host): 00\u000d\u000aDate (host): 20\08\20 23:56:44\u000d\u000aDate (terminal): 20\08\20 23:56:44\u000d\u000aentered offline-PIN\u000d\u000a \u000d\u000a \u000d\u000a CUSTOMER COPY\u000d\u000a ver.:Univ. EMV POS 1.0.0\TITP\u000d\u000a 1.0\671\u000d\u000a Entered offline-PIN\u000d\u000a_____ \u000d\u000a THANK YOU\u000d\u000a===== \u000d\u000a", "tid": "14150026", "transactionType": "Sale" } </pre>			
Example Response from Eazzypay			

```
{
  "amount": "500",
  "authCode": "00",
  "currency": "404",
  "invoiceNo": "45",
  "Tillno": "6543215431",
  "msg": "Approved",
  "CustomerNo": "0729566878",
  "CustomerName": "Dan O. Anne",
  "respCode": "00",
  "TransactionNo": "0000000000084",
  "tid": "87432100",
  "transactionType": "Sale"
}
```

Example Response from MPESA

```
{
  "amount": "500",
  "authCode": "00",
  "currency": "404",
  "invoiceNo": "45",
  "Tillno": "6543215431",
  "msg": "Approved",
  "CustomerNo": "0729566878",
  "CustomerName": "Dan O. Anne",
  "respCode": "00",
  "TransactionNo": "0000000000084",
  "tid": "87432100",
  "transactionType": "Sale"
}
```

Example Response from MVISA

```
{
  "amount": "500",
  "authCode": "00",
  "currency": "404",
  "invoiceNo": "45",
  "Accountno": "6543215431",
  "msg": "Approved",
  "CustomerAccountNO": "0729566878",
  "CustomerName": "Dan O. Anne",
  "respCode": "00",
  "TransactionNo": "0000000000084",
  "tid": "87432100",
}
```



```
"transactionType":"Sale"
}
```

Example Response from Masterpas

```
{
  "amount":"500",
  "authCode":":00",
  "currency":"404",
  "invoiceNo":":45",
  "Accountno":"6543215431",
  "msg":"Approved",
  "CustomerAccountNO":":0729566878",
  "CustomerName":":Dan O. Anne",
  "respCode":"00",
  "TransactionNo":":0000000000084",
  "tid":"87432100",
  "transactionType":"Sale"
}
```

7. Reversal/Void

A reversal transaction will reverse a previous transaction in the current batch.

Parameter	Description
URL	http://localhost:6120/feft/Reversal
HTTP Method	POST

Request	Element	Format		Description
	TransKey	An12	M	Unique transaction key assigned by the system that will refer to the transaction to be reversed – This is Retrieval Reference Number (RRN)
	Bank	An3	M	Bank name, used to indicate which PIN Pad to activate.
	Amount	N12	M	Purchase Amount to be reversed
Example: <pre>{“TransKey”:” 0000000000084”,”Bank”:”2”, “Amount” : “500”,; “LBR02”}</pre>				
Response	Element	Format		Description
	Amount	N12	M	Amount
	RespCode	N3	O	Response Code
	Msg	Text	O	Response Message representing the response code
	Stan	N6	O	System Trace Number
	RRN	An12	O	Retrieval Reference Number
	AuthCode	N6	O	Authorization Code
	Example: <pre>{ "amount":500, "respCode":"00", "msg":"Approved", "stan":"000049", "rrn":"0000000000084", "authCode": "123456" }</pre>			

8. Reconciliation/ batch closing

A reconciliation/ batch closing request

Parameter	Description
URL	http://localhost:6120/feft/recon

HTTP Method	POST																							
Request	<table><tr><th>Element</th><th>Format</th><th></th><th>Description</th></tr><tr><td>Bank</td><td>An3</td><td>M</td><td>Bank name, used to indicate which PIN Pad to activate.</td></tr><tr><td></td><td></td><td></td><td></td></tr></table> <p>Example:</p> <pre>{”Bank”.”1”}</pre>				Element	Format		Description	Bank	An3	M	Bank name, used to indicate which PIN Pad to activate.												
Element	Format		Description																					
Bank	An3	M	Bank name, used to indicate which PIN Pad to activate.																					
Response	<table><tr><th>Element</th><th>Format</th><th></th><th>Description</th></tr><tr><td>ResponseCodeHost</td><td>Text</td><td>M</td><td>Host details</td></tr><tr><td>RespCode</td><td>N3</td><td>O</td><td>Response Code</td></tr><tr><td>Msg</td><td>Text</td><td>O</td><td>Response Message representing the response code</td></tr><tr><td>Slip</td><td>N6</td><td>O</td><td>The Batch close transaction Slip</td></tr></table> <p>Example:</p> <pre>{ "ResponseCodeHost":null,"msg":"Succesfully","respCode":"00", "slip": "=====\u000d\u000a Shift closing report\u000d\u000a Totals match\u000d\u000aDate:21\u0000\u</pre>				Element	Format		Description	ResponseCodeHost	Text	M	Host details	RespCode	N3	O	Response Code	Msg	Text	O	Response Message representing the response code	Slip	N6	O	The Batch close transaction Slip
Element	Format		Description																					
ResponseCodeHost	Text	M	Host details																					
RespCode	N3	O	Response Code																					
Msg	Text	O	Response Message representing the response code																					
Slip	N6	O	The Batch close transaction Slip																					

	SSD\000d\000aTOTAL:\000d\000a Debit cancel:	-
	UGX\000d\000a	
	UGX\000d\000aTOTAL:\000d\000aCredit cancel:	+0.00
	TZS\000d\000a	0.00
	TZS\000d\000aTOTAL:\000d\000aCredit cancel:	+0.00
	USD\000d\000a	0.00
	USD\000d\000aTOTAL:\000d\000a Debit cancel:	-
	BIF\000d\000a	
	BIF\000d\000aTOTAL:\000d\000aDebit:	1.00
	KSH\000d\000aCredit cancel:	+0.00 KSH\000d\000a
	1.00 KSH\000d\000a=====	
	\000d\000a=====	\000d\000a
	End of	
	report\000d\000a=====	\000d\000a"} }

9. Response Codes

Responses will come with response message

10. EFT provider and their codes as per the document

1. KCB Kenya Commercial Bank
2. EBL Equity Bank Limited
3. ABSA Absa Bank
4. MPESA
5. Eazzypay
6. AirtelMoney
7. TelkomCash
8. Mvisa
9. Masterpass
10. AirtelMoney
11. TelkomMoney
12. UBA United Bank of Africa
13. MVISA
14. Masterpass
15. COP Cooperative Bank
16. ECB Equatorial Commercial Bank