

Corporate Digital Banking

BSNeBiz Fraud Management System

Business Requirement and Functional Document

(PENRIL/BSN/BRFD_CDB(CR)036 – [CR23002]) Revision: 00

22nd August 2023

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Document Amendment Log

| Rev. No | Date Update | Description of Change | Update By <name, dept=""></name,> | Review By <name, dept=""></name,> |
|------------|-------------|-----------------------|--------------------------------------|--------------------------------------|
| 00 | 22/08/23 | Initial Release | Athirah Umairah Quality Engineer | Norhaidah Dasuki Senior Manager |



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Business Requirement & Functional Acceptance

I/We hereby verify that this Business Requirement & Functional consist of all the requirements requested by BANK SIMPANAN NASIONAL. The implemented system will fulfill ONLY this requirement.

I/We also hereby AGREE that this satisfies our entire requirement for **BSNeBiz Fraud Management System.**

Any future changes to this agreed scope would be treated as an enhancement to the system. Any future changes to the project timeline will be subjected to the final approval of the project steering committee.

BANK SIMPANAN NASIONAL:

| Approved by | Role | Signature | Date |
|-------------|------|-----------|------|
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| | | | |



Section A: Introduction

1 Introduction

This document served as the business requirement and system specification of implementing **Fraud Management System** in BSNeBiz, which is customer able to make new application and digital signing via online.

This document shall explain all the features and functionalities, which is elaborating with screen captures, process flow, descriptions, input fields specifications and error messages. All screen designs provided in this document are samples and only illustration purpose for easy understanding. The screen designs are not final.

1.1 Objective

The objective of this document is to capture user requirements of transactional and administration modules of implementing BSNeBiz Fraud Management System. This document will facilitate development and implementation of the mentioned modules of Internet Banking System for BSNeBiz.

The base line features description and screen designs will become a reference blueprint for the development team to develop the transactional and administration module. Hence, it is crucial that all stakeholders need to ensure the correctness and adequacy of the requirements captured in this document.

All stakeholders involved are expected to review and sign off this document before the development starts. By signing the document, the stakeholder has endorsed the correctness and accuracy and adequacy of the requirements documented in this document.



1.2 Assumptions

- 1. BSNeBiz Web Application
 - a. FHP and Predator plugin / code will be applied to every module including monetary and nonmonetary based on FHP Rule Flow.
 - b. The security question will be implemented to every module if triggered FHP and Predator rule.
- 2. BSNeBiz Mobile Application
 - a. FHP and Predator plugin / code will be applied to every module including monetary and nonmonetary based on FHP Rule Flow.
 - b. The security question will be implemented to every module if triggered FHP and Predator rule.
- 3. IBAM
 - a. To create new module at IBAM level that allow Bank Admin to maintain the Fraud Management Process
 - Bypass FHP and Predator
- 4. Any other services which are not mentioned in SOW item 1.3 below will be treated as Change of Requirement.



1.3 Scope of Works

| System | Modules | Features | Description |
|---------------------|-------------------------------|-------------------|--|
| IBAM | Fraud Management | FHP & Predator | Create new module at IBAM level that allow Bank Admin to maintain the Fraud Management Process • Bypass FHP and Predator |
| BSNeBiz (Web) | Monetary and Non- Monetary | FHP & Predator | Apply FHP and Predator plugin / code to every module including monetary and non-monetary based on FHP Rule Flow. Implement the security question to every module if triggered FHP and Predator rule. • Transactions • Favourite Maintenance • NAD • Merchant QR • Account Summary • Sweeping Account • Login • First Time Login • Activate Token • Device Pairing • Forgot Password • Change Password • Change Security |
| BSNeBiz (Mobile) | Monetary and Non- Monetary | FHP & Predator | Apply FHP and Predator plugin / code to every module including monetary and non-monetary based on FHP Rule Flow. Implement the security question to every module if triggered FHP and Predator rule. Transactions Quick Balance Login DuitNow QR |





1.4 FHP Rules Flow



- 1. FHP tracking code at BSN website/mobile apps sends collected data to FHP Cloud
- 2. FHP rules setup at FHP Cloud via FHP Admin Panel
 - FHP rules will be sent to Predator via Push API if it is enabled and configured to sent through API
- 3. FHP alert messages received at Predator side
 - Any Predator rules to be created for these FHP rules?

Possible options:

- To create a Predator rule based on certain types of FHP rules Strong action = Block related transactions if these FHP rules triggered e.g. if type_id = 4 (multiple accounts within same FHP session) AND current count >=10 (More than 10 distinct users in the same FHP session), then: To Block related transactions
- To create a Predator rule based on session score (i.e. device_score) e.g. if device_score
 >= 70, then: To Step up related transactions
- To create a Predator rule based on types of FHP rules + session score e.g. if type_id = 111 (First time login of current user in this new device) AND device_score = 100, then: To Block related transactions
- To keep FHP rules as data enrichment only. To use these rules for investigation and analysis purpose (i.e. Not mapped to a specific Predator rule)
- 3. BSN system received Predator messages (which contain FHP rules)
 - To Step up / Hold / Approve / Reject transactions based on Predator message's `Rule Decision`



1.5 Rule Decision Mapping for BSNeBiz

| Rule Decision | BSNeBiz Mapping |
|---------------|-----------------|
| NULL | OK |
| "00" | StepUp |
| "01" | Hold |
| "02" | Reject |
| "03" | Approve |

Predator will process this transaction and return a Rule Decision to BSNeBiz.

Note: OK means no rules were triggered



1.6 Functional Overview

The following diagram shows a high-level overview of how Predator does transaction Fraud checking.











Section B: BSNeBiz Web Application

2 SOW01: Enhancement at BSNeBiz Web Application

2.1 SOW01.1: To apply FHP and Predator plugin / code to every module include monetary and non-monetary based on FHP Rule Flow

| Function ID | SOW01.1 | | | |
|--|--|--|--|--|
| Module Name | Monetary and Non-Monetary Path BSNeBiz | | | |
| Description FHP and Predator will apply to every module for monetary and non-mone transaction based on transaction code in BSNeBiz in table below. | | | | |

| No | Value | Description | Туре |
|----|----------------|-----------------------------|----------|
| 1 | BFUNOWN | FUND TRANSFER OWN | Monetary |
| 2 | BFUNLOAN | FUND TRANSFER LOAN | Monetary |
| 3 | BFUNFRA | FUND TRANSFER INTRABANK FAV | Monetary |
| 4 | BFUNORA | FUND TRANSFER INTRABANK NEW | Monetary |
| 5 | BFUNFER | FUND TRANSFER INTERBANK FAV | Monetary |
| 6 | BFUNOER | FUND TRANSFER INTERBANK NEW | Monetary |
| 7 | BFUNFRR | FUND TRANSFER FAV RENTAS | Monetary |
| 8 | BFUNORR | FUND TRANSFER NEW RENTAS | Monetary |
| 9 | BFUNCARD | FUND TRANSFER CORP CARD | Monetary |
| 10 | BFUNOEDUITN OW | FUND TRANSFER DUITNOW NEW | Monetary |
| 11 | BFUNFEDUITN OW | FUND TRANSFER DUITNOW FAV | Monetary |
| 12 | BFUNTD | FUND TRANSFER TERM DEPOSIT | Monetary |



| No | Value | Description | Туре |
|----|--------------|--------------------------------------|--------------|
| 13 | BBILLOPEN | BILL PAYMENT NEW PAYMENT | Monetary |
| 14 | BBILLFAV | BILL PAYMENT FAV PAYMENT | Monetary |
| 15 | BNBPSOPEN | JOMPAY NEW PAYMENT | Monetary |
| 16 | BNBPSYFAV | JOMPAY FAV PAYMENT | Monetary |
| 17 | BADENLFU | AUTO_DEBIT_ENROLLMENT_FILE_UPLOAD | Non-Monetary |
| 18 | BADENLDE | AUTO_DEBIT_ENROLLMENT_DATA_ENTRY | Non-Monetary |
| 19 | BADBILFU | AUTO_DEBIT_BILLING_FILE_UPLOAD | Monetary |
| 20 | BADBILDE | AUTO_DEBIT_BILLING_DATA_ENTRY | Monetary |
| 21 | BAUCRFU | AUTO_CREDIT_FILE_UPLOAD | Monetary |
| 22 | BAUCRDE | AUTO_CREDIT_DATA_ENTRY | Monetary |
| 23 | BAUCRWOACF U | AUTO_CREDIT_WO_ACCT_FILE_UPLOAD | Monetary |
| 24 | BAUCRWOACPA | AUTO_CREDIT_WO_ACCT_PAYMENT_APPROVED | Monetary |
| 25 | BPRUBSNFU | PRU_BSN_FILE_UPLOAD | Monetary |
| 26 | BKWSPFU | STATUTORY_KWSP_FILE_UPLOAD | Monetary |
| 27 | BKWSPDE | STATUTORY_KWSP_DATA_ENTRY | Monetary |
| 28 | BKWSPOP | STATUTORY_KWSP_OTHER_PAYMENT | Monetary |
| 29 | BSOCSOFU | STATUTORY SOCSO FILE UPLOAD | Monetary |
| 30 | BSOCSODE | STATUTORY SOCSO DATA ENTRY | Monetary |
| 31 | BZAKATDE | STATUTORY ZAKAT DATA ENTRY | Monetary |
| 32 | BZAKATFU | STATUTORY ZAKAT FILE UPLOAD | Monetary |



| No | Value | Description | Туре |
|----|-------------------|----------------------------|--------------|
| 33 | BLHDNFU | STATUTORY_LHDN_FILE_UPLOAD | Monetary |
| 34 | BLHDNDE | STATUTORY_LHDN_DATA_ENTRY | Monetary |
| 35 | BSWEEPFUND TF | SWEEPING ACCOUNT TRANSFER | Monetary |
| 36 | BACCLOGIN | ACCESS_LOGIN | Non-Monetary |
| 37 | BACCLOGOUT | ACCESS_LOGOUT | Non-Monetary |
| 38 | BACCFPA | ACCESS_RESET_PASSWORD | Non-Monetary |
| 39 | BASPSS | ACCESS_RESET_SECURE_PASS | Non-Monetary |
| 40 | BACCREG | ACCESS_FT_LOGIN | Non-Monetary |
| 41 | BACCTAC | ACCESS_FT_TAC | Non-Monetary |
| 42 | BDEVICEPAIRI NG | ACCESS_DEVICE_PAIRING | Non-Monetary |
| 43 | BREGISTRATI ON | ACCESS_REGISTRATION | Non-Monetary |
| 44 | BMIGRATEDLO GIN | ACCESS_MIGRATED_LOGIN | Non-Monetary |
| 45 | BENQSUM | ACCOUNT_ENQUIRY_SUMMARY | Non-Monetary |
| 46 | BNOADET | NORMAL_ACC_DETAILS | Non-Monetary |
| 47 | BLNADET | LOAN_ACC_DETAILS | Non-Monetary |
| 48 | BESTMNT | E_STATEMENT | Non-Monetary |
| 49 | BTRANSHIST | TRANSACTION_HISTORY | Non-Monetary |
| 50 | BONLINEHIST | ONLINE_TRANSACTION_HISTORY | Non-Monetary |
| 51 | BACCVALIDATI ON | ACCOUNT_VALIDATION | Non-Monetary |
| 52 | BCASHLINEIN OTICE | CASHLINE_I_NOTICE | Non-Monetary |



| No | Value | Description | Туре |
|----|------------------|-----------------------------|--------------|
| 53 | BFUNMRA | FUND_TRANSFER_INTRA_MAINT | Non-Monetary |
| 54 | BFUNMRAADD | FUND_TRANSFER_INTRA_ADD | Non-Monetary |
| 55 | BFUNMRAEDIT | FUND_TRANSFER_INTRA_EDIT | Non-Monetary |
| 56 | BFUNMRADEL | FUND_TRANSFER_INTRA_DELETE | Non-Monetary |
| 57 | BFUNMER | FUND_TRANSFER_INTER_MAINT | Non-Monetary |
| 58 | BFUNMERADD | FUND_TRANSFER_INTER_ADD | Non-Monetary |
| 59 | BFUNMEREDIT | FUND_TRANSFER_INTER_EDIT | Non-Monetary |
| 60 | BFUNMERDEL | FUND_TRANSFER_INTER_DELETE | Non-Monetary |
| 61 | BBILLFAVMAINT | BILL PAYMENT FAV PAYEE | Non-Monetary |
| 62 | BBPFAVPAYAD | BILL PAYMENT FAV PAYEE ADD | Non-Monetary |
| 63 | BBPFAVPAYDE | BILL PAYMENT FAV PAYEE DEL | Non-Monetary |
| 64 | BBPFAVPAYED | BILL PAYMENT FAV PAYEE EDIT | Non-Monetary |
| 65 | BJOMPAYFAV MAINT | JOMPAY FAV BILLER | Non-Monetary |
| 66 | BBPFAVBILLAD | JOMPAY FAV BILLER ADD | Non-Monetary |
| 67 | BBPFAVBILLDE | JOMPAY FAV BILLER DEL | Non-Monetary |
| 68 | BBPFAVBILLED | JOMPAY FAV BILLER EDIT | Non-Monetary |
| 69 | BSWPACCM | SWEEPING_ACCOUNT_MAIN | Non-Monetary |
| 70 | BSWPACCMN | SWEEPING_ACCOUNT_MAINT_NEW | Non-Monetary |
| 71 | BSWPACCH | SWEEPING_ACCOUNT_HISTORY | Non-Monetary |
| 72 | BSWEEPFUND | SWEEPING_ACCOUNT | Non-Monetary |



| No | Value | Description | Туре |
|----|-----------------|---|--------------|
| 73 | BSWEEPFUND A | SWEEPING_ACCOUNT_ADD | Non-Monetary |
| 74 | BSWEEPFUND ACT | SWEEPING_ACCOUNT_ACTIVATE | Non-Monetary |
| 75 | BSWEEPFUND DACT | SWEEPING_ACCOUNT_DEACTIVATE | Non-Monetary |
| 76 | BSWEEPFUND D | SWEEPING_ACCOUNT_DELETE | Non-Monetary |
| 77 | BSWPACCMCP A | SWEEPING_ACCOUNT_MAIN_CREATE_PAYMENT_A CCT | Non-Monetary |
| 78 | BSWPACCMSTOP | SWEEPING_ACCOUNT_MAIN_STOP_PAYMENT_ACC T | Non-Monetary |
| 79 | BSWPACCMAC T | SWEEPING_ACCOUNT_MAIN_ACTICE_PAYMENT_A CCT | Non-Monetary |
| 80 | BSWPACCMEP A | SWEEPING_ACCOUNT_MAIN_EDIT_PAYMENT_ACCT | Non-Monetary |
| 81 | BADENLHL | AUTO_DEBIT_ENROLLMENT_HISTORY_LISTING | Non-Monetary |
| 82 | BAUDBENCF | AUTO_DEBIT_ENROLLMENT_CANCEL_FILE | Non-Monetary |
| 83 | BADBILHL | AUTO_DEBIT_BILLING_HISTORY_LISTING | Non-Monetary |
| 84 | BAUDBBILCF | AUTO_DEBIT_BILLING_CANCEL_FILE | Non-Monetary |
| 85 | BAUCRHL | AUTO_CREDIT_HISTORY_LISTING | Non-Monetary |
| 86 | BAUCRCF | AUTO_CREDIT_CANCEL_FILE | Non-Monetary |
| 87 | BAUCRWIN | AUTO_CREDIT_WINDOW | Non-Monetary |
| 88 | BKWSPTEST | STATUTORY_KWSP_TEST_DATA_ENTRY Non-N | |
| 89 | BKWSPHL | STATUTORY_KWSP_HISTORY_LISTING | Non-Monetary |
| 90 | BKWSPCF | STATUTORY_KWSP_CANCEL_FILE | Non-Monetary |
| 91 | BLHDNHL | STATUTORY_LHDN_HISTORY_LISTING | Non-Monetary |



| No | Value | Description | Туре |
|----|---------|----------------------------|--------------|
| 92 | BLHDNCF | STATUTORY_LHDN_CANCEL_FILE | Non-Monetary |



2.2 SOW01.2: To implement the security question to every module if triggered FHP and Predator rule

2.2.1 SOW01.2a: Transactions

| Function ID | SOW01.2a | | | |
|-------------|---|--------------|-----------|---|
| Module Name | Transactions | | Path | BSNeBiz |
| Description | Step-up authentication will be implemented to module that related with fund transfe or payment module. This step-up authentication will be redirected based on FHP an Predator analysis result. | | | ented to module that related with fund transfer entication will be redirected based on FHP and |
| | Below are type of fund transfer module implemented with FHP and Predator enhancement: | | | odule implemented with FHP and Predator |
| | a) Trai | nsfer & Paym | ent | |
| | i. | Own Accour | nt Transf | er |
| | ii. | BSN/IBG/RE | NTAS | |
| | 111. | Favourite Ad | count | |
| | b) Jom | PAY | | |
| | i. | New JomPA | Y | |
| | ii. Favourite | | mPAY | |
| | c) DuitNow | | | |
| | i. New DuitN | | w | |
| | ii. | Favourite Du | uitNow | |
| | d) Aut | o Debit | | |
| | i. | File Upload | | |
| | ii. | Data Entry | | |
| | e) Bulk Payment | | | |
| | i. | File Upload | | |
| | ii. Data Entry | | | |
| | f) Statutory Body (EPF/ZAKAT/SOCSO/LHDN) i. File Upload ii. Data Entry | | | AT/SOCSO/LHDN) |



2.2.1.1 Process Flow



Diagram 1: Transactions Process Flow

2.2.1.2 Screen Flow

The Own Account transfer type will be used as a sample for fund transfer screen flow with FHP and Predator.

Step 1:

- 1. BSNeBiz User login to BSNeBiz system.
- 2. Navigate to Transfer & Payment module and select the desire transfer type from drop down list.
- 3. BSNeBiz display selected transfer type details page.



| (\$) BSN | | 🞢 Log Out |
|---|---|-----------|
| Account Summary > | Transfer & Payment | |
| G Transfer & ✓ Payment | Transfer Payment | |
| Transfer & Payment | | |
| Favourite Acc Maintenance | | |
| 🐨 JomPAY > | Details | |
| DuitNow | | |
| Standing > | Transfer Type *Please select | |
| Instructions | -Please select- Own Account Transfer | |
| . O Auto Debit > | BSIVID/GRENTAS E-supurite Account | |
| | 1 and the Recount | |
| 💣 Bulk Payment > | | |
| Statutory Body - > EPF | | |
| Statutory Body - > | | |
| O Reports & Data | | |
| Statutory Body - > SOCSO | | |

Figure 1: Transfer & Payment details screen

Step 2:

- 1. Enter required information for transaction.
- 2. Click "Next" button.



| ransfer Payment | | |
|-------------------------|----------------------|--|
| | | |
| | Details | |
| Please fill in details. | | |
| Transfer Type * | Own Account Transfer | ~ |
| Transfer From * | Please select | ~ |
| Transfer To * | Please select | ~ |
| Amount * | | |
| Recipient Reference * | | |
| Other Transfer Details | | |
| Transfer Mode * | Transfer Now | ~ |
| | | Note: All fields with asterisks (*) are mandatory. |
| Clear | | Next |

Figure 2: Transfer & Payment details screen

Step 3:

- 1. View transaction details on the confirmation page.
- 2. Click on "Confirm" button.
- 3. BSNeBiz will call FHP and Predator to perform Risk Analysis process with require information.
- 4. BSNeBiz perform checking on action code from FHP and Predator analysis response:
 - b. IF risk analysis response action code **REJECT**, BSNeBiz will throws error message "You are not allows to perform this transaction. Please contact BSNeBiz Contact Centre at 1300 88 1900 for assistance" and will redirect user to logout page.
 - c. IF risk analysis response action code is **OK** and user status is **APPROVE/UNLOCK**, a user is allows to skip the step-up authentication and the BSNeBiz will redirect user to result screen at step 5.
 - d. IF risk analysis response action code **STEPUP**, the BSNeBiz will pop up Security question screen for user to answer security question at next step 4.



| Transfer Payment | | |
|--------------------------------|---|---|
| | | |
| | Confirmation | |
| Please check your information. | | |
| Organization Name | VOC DT ACADEMY SDN BHD VOC DT ACADEMY SDN BHD | |
| Transfer Type | Own Account Transfer | |
| Transfer From | 1413629100000437 | |
| Transfer To | 0099929100000375 | |
| Amount | RM10.00 | |
| Charges | RM0.20 | |
| GST Charges | RM0.01 | |
| Recipient Reference | test | |
| Other Transfer Details | test | |
| Transfer Mode | Transfer Now | |
| Back | Confirm | |
| | | _ |

Figure 3: Transfer & Payment – Confirmation screen

Error messages for the screen:

| No | Action Code | Error Description in English |
|----|-------------|--|
| 1. | REJECT | Return error message "You are not allows to perform this |
| | | transaction. Please contact BSNeBiz Contact Centre at 1300 88 1900 |
| | | for assistance". |
| - | • | Table 2. Fraud Alart - Daturn From Massage |

Table 2: Fraud Alert - Return Error Message

Step 4:

- 1. Retrieve the Security question and display to user.
- 2. User answer the question and click submit button.
- 3. BSNeBiz request FHP and Predator to validate the submitted answer.
 - a. IF the response return "Yes", indicate the answer is correct, BSNeBiz will redirect user to step 5.
 - b. IF the response return "No", indicate the answer is incorrect. BSNeBiz perform checking on error counting.
 - i. Unlocked BSNeBiz request FHP and Predator to return next Security question.



 ii. Locked – BSNeBiz throws error message "Access has been locked. Please contact BSNeBiz Contact Centre at 1300 88 1900 for assistance" and will redirect user to logout page.

| ₿BSN | | 🞢 Log Out |
|--|--|-----------|
| | Transfer & Payment | |
| MEASAT BROADCAST NETWORK SYSTEMS SDN BHD | Transfer Payment | |
| Your last login was on Isnin, 11 September 2023 14:03:56 | | _ |
| ⊥ ⊠° ≙ ♥ ► | Confirmation | |
| 1 Home | Please check your information. | |
| Account Summary > | Organization Name MEASAT BROADCAST NETWORK SYSTEMS SDN BHD | |
| B→ Payment | Transfer Type Own Account Transfer | |
| Transfer & Payment Favourite Acc Maintenance | Transfer From 0010041100033345 | |
| 평 JomPAY > | Transfer To 0713041100000887 | |
| 🧕 DuitNow > | Amount RM32.00 | |
| Standing > | Charges RM0.20 | |
| 🔎 Auto Debit > | Other Transfer Details | |
| 💣 Bulk Payment > | Transfer Mode Transfer Now | |
| Statutory Body - > | Back | |
| Statutory Body - > SOCSO | Security Question What's your favourite pet? | |
| Statutory Body - > ZAKAT | Answer* | |
| Reports & Data | Submit | |
| Sweeping Account > | | |
| 0 | | |

Figure 4: Fraud Alert – Security Question screen

Display Specification:

| No | Field | Field Type | Description |
|----|-------------------|------------|------------------------------|
| 1. | Security Question | Text | Details of security question |

Table 3: Fraud Alert – Security Question Display Specification

Input Specification:

| No | Field | Field Type | Rule | Description | Required |
|----|--------|------------|--------------|---------------------------|----------|
| 1. | Answer | Text Box | Alphanumeric | Input answer for security | Yes |
| | | | | question | |

LAST UPDATED: 21 September 2023 VER.00



Table 4: Fraud Alert – Security Question Input Specification

Action:

| No | Action | Туре | Description |
|----|--------|--------|---|
| 1. | Submit | Button | Contains an action to submit the security question to FHP and Predator to process response. |
| 2. | Close | Button | Contains an action to close the security question |

Table 5: Fraud Alert - Security Question Action

List of available messages for the screen:

| No | Event | Error Description in English |
|----|---|--|
| 1. | Submit empty field | Security Question answer is required |
| 2. | FHP and Predator return error incorrect | Security Question answer is incorrect |
| | answer | |
| 3. | FHP and Predator return user status | Access has been locked. Please contact BSNeBiz |
| | locked | Contact Centre at 1300 88 1900 for assistance |

Table 6: Fraud Alert - Security Question Error Message

Step 5:

1. BSNeBiz display Transfer & Payment result page.



| fer & Payment | |
|---|---|
| sfer Payment | |
| | |
| | Result |
| ase keep your transaction receipt for future referance. | |
| Per | nding Approval 🛛 |
| Transfer To 0099929100000375 | RM10.00 |
| Organization Name | VOC DT ACADEMY SDN BHD VOC DT ACADEMY SDN BHD |
| Transfer Type | Own Account Transfer |
| Transfer From | 1413629100000437 |
| Charges | RM0.20 |
| Recipient Reference | test |
| Other Transfer Details | test |
| Transfer Mode | Transfer Now |
| Reference No. | 20230817000000071594 |
| Transaction Date | 17/08/2023 |
| Transaction Time | 17:23:42 |
| Print receipt | Make Another Transfer |
| | |

Figure 5: Transfer & Payment – Result screen

Status might be different depending on the organization setup. For workflow company, the status will be **Pending Verify or **Pending Approval**. For non-workflow company, the status will be **Successful**.



2.2.2 SOW01.2b: Favourite Maintenance

| Function ID | SOW01.2b | | | |
|-------------|---|------|---------|--|
| Module Name | Favourite Maintenance | Path | BSNeBiz | |
| Description | Step-up authentication will be implemented to module that related with favourite maintenance module. This step-up authentication will be redirected based on FHP and Predator analysis result. | | | |
| | Below are type of favourite maintenance implemented with FHP and Predatenhancement: a) Transfer & Payment i. Add ii. Edit iii. Delete b) JomPAY i. Add ii. Edit iii. Delete | | | |
| | c) DuitNow i. Add ii. Edit iii. Delete | | | |



2.2.2.1 Process Flow



Diagram 2: Favourite Maintenance Process Flow

2.2.2.2 Screen Flow

The Transfer & Payment – Favourite Maintenance (Add) will be used as a sample for favourite maintenance screen flow with FHP and Predator.

Step 1:

- 1. BSNeBiz User login to BSNeBiz system.
- 2. Navigate to Transfer & Payment Favourite Maintenance module.
- 3. Click on "Add" button.

| ₿BSN | | | | | | 📌 Log Out |
|--|----------------------------|-------------|------------------|------------------------|----------|-----------|
| Your last login was on Monday, 21 August 2023 15:06:48 | Favourite Acc Ma | intenance | | | | |
| ≗ ≊° ≙ ♥ ► | Transfer Payme | nt | | | | |
| Account Summary → | | | Li | sting | | |
| G→ Transfer & ✓ Payment | Show 10 v entrie | s | | | Search: | |
| Transfer & Payment | • | Bank Name | Account Number | Beneficiary Name | Action | |
| Favourite Acc Maintenance | | BSN | 0099929100000294 | PETAL SDN BHD (BSN) | 🗭 Edit | _ |
| 🦥 JomPAY > | | PUBLIC BANK | 5000040430 | test ibg fav | 🕑 Edit | |
| DuitNow > | Showing 1 to 2 of 2 entrie | 15 | | | Previoue | 1 Nevt |
| Standing > | | | | | Previous | INEXT |
| Instructions | | | | | Delete | Add |
| 👏 Auto Debit > | | | | | | |
| 💣 Bulk Payment > | | | | | | |
| Statutory Body - > EPF | | | | | | |

Figure 6: Favourite Maintenance – Listing screen



Step 2:

1. BSNeBiz display favourite maintenance details page.

| ₿BSN | | | 📌 Log Out |
|--|---------------------------|--|-----------|
| Your last login was on Monday, 21 August 2023 15:08:48 | Favourite Acc Maintenance | | |
| ≗ ∞ ≙ ♥ ► | Transfer Payment | | |
| f Home | | Details | |
| Account Summary > | | | |
| G⇒ Transfer & ✓ Payment | Bank Name * | Please select- | |
| Transfer & Payment | | BANK SIMPANAN NASIONAL AFFIN BANK | |
| Favourite Acc Maintenance | | AGRO BANK AL-RAJHI BANKING & INVESTMENT ALLIANCE BANK | |
| 👹 JomPAY > | | AMBANK BANGKOK BANK BERHAD BANK ISLAM MALAYSIA | |
| DuitNow | | BANK MUAMALAT BANK OF AMERICA(MALAYSIA) BHD | |
| Standing > Instructions | | BANK OF CHINA (MALAYSIA) BHD BANK RAKYA BNP PARIBAS MALAYSIA BERHAD CHINA CONSTRUCTION BANK | |
| 👏 Auto Debit 🛛 🗧 | | CIMB BANK BERHAD CITIBANK DEUTSCHE BANK(MALAYSIA) BHD | |
| 💣 Bulk Payment > | | HONG LEONG BANK HSBC | |
| Statutory Body - > | | | |

Figure 7: Favourite Maintenance – Details screen

Step 3:

- 1. Enter required information for favourite maintenance details.
- 2. Click "Next" button.

| ₿BSN | | | 👫 🛛 Log Out |
|--|---------------------------------|--|-------------|
| Your last login was on Monday, 21 August 2023 15:06:48 | Fund Transfer Maintenance - Add | | |
| ≗ ∞• ≗ ♥ ► | Transfer Payment | | |
| n Home | | | |
| Account Summary > | | Details | |
| <-S G→ Transfer & ✓ Payment | | | |
| Transfer & Payment | Bank Name * PUB | LIC BANK 🗸 | |
| Favourite Acc Maintenance | Beneficiary Account Number | | |
| - JomPAY JomPAY | Click he | re for Account Number length | |
| 0 | Beneficiary Name * | | |
| DuitNow > | | Note: All fields with asterisks (*) are mandatory. | |
| Standing > Instructions | Back | Next | |
| 👏 Auto Debit 🛛 🗧 | | | |
| 💣 Bulk Payment > | | | |
| Statutory Body - > EPF | | | |

Figure 8: Favourite Maintenance – Details screen



Step 4:

- 1. View details on the confirmation page.
- 2. Click on "Confirm" button.
- 3. BSNeBiz will call FHP and Predator to perform Risk Analysis process with require information.
- 4. BSNeBiz perform checking on action code from FHP and Predator analysis response:
 - a. IF risk analysis response action code **REJECT**, BSNeBiz will throws error message "You are not allows to add new favourite account. Please contact BSNeBiz Contact Centre at 1300 88 1900 for assistance" and will redirect user to logout page.
 - b. IF risk analysis response action code is **OK** and user status is **APPROVE/UNLOCK**, a user is allows to skip the step-up authentication and the BSNeBiz will redirect user to result screen at step 6.
 - c. IF risk analysis response action code **STEPUP**, the BSNeBiz will pop up Security question screen for user to answer security question at next step 5.

| ₿BSN | | 💏 🛛 Log Out |
|--|---------------------------------------|-------------|
| Your last login was on Monday, 21 August 2023 15:06:48 | Fund Transfer Maintenance - Add | |
| ≗ ≅° ≙ ♥ ▶ | Transfer Payment | |
| 1 Home | | |
| Account Summary > | Confirmation | |
| O→ Transfer & ✓ Payment | Beneficiary Bank PUBLIC BANK | |
| Transfer & Payment Favourite Acc Maintenance | Beneficiary Account Number 5000040430 | |
| 🖏 JomPAY > | Beneficiary Name Testing | |
| DuitNow > | Back | |
| Standing > | | |
| 👏 Auto Debit > | | |
| | | |

Figure 9: Favourite Maintenance – Confirmation screen

Error messages for the screen:

| No | Action Code | Error Description in English |
|----|-------------|--|
| 1. | REJECT | Return error message "You are not allows to add new favourite |
| | | account. Please contact BSNeBiz Contact Centre at 1300 88 1900 for |
| | | assistance". |

Table 7: Fraud Alert - Security Question Error Message

Step 5:

- 1. Retrieve the Security question and display to user.
- 2. User answer the question and click submit button.



- 3. BSNeBiz request FHP and Predator to validate the submitted answer.
 - a. IF the response return "Yes", indicate the answer is correct, BSNeBiz will redirect user to step 6.
 - b. IF the response return "No", indicate the answer is incorrect. BSNeBiz perform checking on error counting.
 - i. Unlocked BSNeBiz request FHP and Predator to return next Security question.
 - ii. Locked BSNeBiz throws error message "Access has been locked. Please contact BSNeBiz Contact Centre at 1300 88 1900 for assistance" and will redirect user to logout page.

| Security Question | ity Question What's your favourite pet? | |
|-------------------|---|--------|
| Answer* | | |
| | | Submit |
| | | |

Figure 10: Fraud Alert – Security Question screen

Display Specification:

| No | Field | Field Type | Description |
|----|-------------------|------------|------------------------------|
| 1. | Security Question | Text | Details of security question |

Table 8: Fraud Alert – Security Question Display Specification

Input Specification:

| 1. Answer Text Box Alphanumeric Input answer for security Yes | No | Field | Field Type | Rule | Description | Required |
|---|----|--------|------------|--------------|---------------------------|----------|
| | 1. | Answer | Text Box | Alphanumeric | Input answer for security | Yes |
| question | | | | | question | |

Table 9: Fraud Alert – Security Question Input Specification

Action:

| No | Action | Туре | Description |
|----|--------|--------|---|
| 1. | Submit | Button | Contains an action to submit the security question to |
| | | | FHP and Predator to process response. |
| 2. | Close | Button | Contains an action to close the security question |

Table 10: Fraud Alert - Security Question Action

List of available messages for the screen:

| No | Event | Error Description in English |
|----|--------------------|--------------------------------------|
| 1. | Submit empty field | Security Question answer is required |



| No | Event | Error Description in English |
|----|---|--|
| 2. | FHP and Predator return error incorrect | Security Question answer is incorrect |
| | answer | |
| 3. | FHP and Predator return user status | Access has been locked. Please contact BSNeBiz |
| | locked | Contact Centre at 1300 88 1900 for assistance |

Table 11: Fraud Alert - Security Question Error Message

Step 6:

1. BSNeBiz display Favourite Maintenance result page.

| ₿BSN | | 👫 🛛 Log Out |
|--|-----------------------------------|-------------|
| Your last login was on Monday, 21 August 2023 15:06:48 | Fund Transfer Maintenance - Add | |
| ≗⊠°≙♥► | Transfer Payment | |
| ff Home | | |
| Account Summary > | Result | |
| G → Transfer & ✓ Payment | Status Successful | |
| Transfer & Payment Favourite Acc | Reference No. 2023082100000005125 | |
| JomPAY > | Transaction Date 20230821 1538:15 | |
| PuitNow > | Transaction Time 15.38.15 | |
| العليمي Standing > | Account Number 5000040430 | |
| Auto Debit | Beneficiary Bank PUBLIC BANK | |
| Bulk Payment > | Beneticary Name Testing | |
| Statutory Body - > EPF | Back | |

Figure 11: Favourite Maintenance – Result screen



2.2.3 SOW01.2c: NAD

| Function ID | SOW01.2c | | |
|-------------|--|------|---------|
| Module Name | NAD | Path | BSNeBiz |
| Description | Step-up authentication will be implemented to module that related with NAD module. This step-up authentication will be redirected based on FHP and Predator analysis result. | | |
| | Below are NAD module implemented with FHP and Predator enhancement: a) NAD Registration | | |
| | b) NAD Maintenance i. Edit ii. Delete iii. Activate iv. Block | | |

2.2.3.1 Process Flow



Diagram 3: NAD Registration Process Flow

2.2.3.2 Screen Flow

The NAD – NAD Registration will be used as a sample for NAD screen flow with FHP and Predator.



Step 1:

- 1. CA login to BSNeBiz system.
- 2. Navigate to NAD NAD Registration module.
- 3. BSNeBiz display NAD Registration details page.

| ₿BSN | | 📌 Log Out |
|--|---|-----------|
| Welcome, ADMM01779 LOONG EXPRESS TRADING Your last login was on Wednesday, 20 September 2023 15:32:07 | NAD Registration | |
| Home Maintenance | DuitNow ID Type * -Please select Business Registration No Mobile Number | |
| NAD Registration NAD Maintenance | | |

Figure 12: NAD Registration – Details screen

Step 2:

- 1. Enter required information for favourite maintenance details.
- 2. Click "Next" button.

| ₿BSN | | | 📌 Lo | og Out |
|--|---------------------|--------------------------|--|--------|
| Welcome, | NAD Registration | | | |
| ADMM01779 LOONG EXPRESS TRADING Your last login was on Wednesday, 20 September 2023 15:32:07 | | Details | | |
| ≗⊠°≙♥► | | | | |
| Home | DuitNow ID Type * | Business Registration No | ~ | |
| Maintenance > | DuitNow ID * | 002904085-P | ~ | |
| P NAD V | Receiving Account * | 1212729000273728 | ~ | |
| NAD Registration | | | Note: All fields with asterisks (*) are mandatory. | |
| Merchant QR | Clear | | Next | |
| \langle | | | | |
| | | | | |
| | | | | |

Figure 13: NAD Registration – Details screen



Step 3:

- 1. View details on the confirmation page.
- 2. Click on "Confirm" button.
- 3. BSNeBiz will call FHP and Predator to perform Risk Analysis process with require information.
- 4. BSNeBiz perform checking on action code from FHP and Predator analysis response:
 - a. IF risk analysis response action code **REJECT**, BSNeBiz will throws error message "You are not allows to register new NAD. Please contact BSNeBiz Contact Centre at 1300 88 1900 for assistance" and will redirect user to logout page.
 - b. IF risk analysis response action code is **OK** and user status is **APPROVE/UNLOCK**, a user is allows to skip the step-up authentication and the BSNeBiz will redirect user to result screen at step 5.
 - c. IF risk analysis response action code **STEPUP**, the BSNeBiz will pop up Security question screen for user to answer security question at next step 4.

| ₿BSN | | 📌 Log Out |
|--|--|--|
| Welcome, ADMM01779 LOONG EXPRESS TRADING Your last login was on Wednesday, 20 September 2023 15:32:07 | NAD Registration | firmation |
| Home Mainlenance >> NAD Registration NAD Maintenance MAD Maintenance >> MAD Merchant OR >> | DuitNow ID Type DuitNow ID Receiving Account Back | Business Registration No 002904085-P 1212729000273728 Confirm |
| | | |

Figure 14: NAD Registration – Confirmation screen

Error messages for the screen:

| No | Action Code | Error Description in English |
|----|-------------|---|
| 1. | REJECT | Return error message "You are not allows to register new NAD. |
| | | Please contact BSNeBiz Contact Centre at 1300 88 1900 for |
| | | assistance". |

Table 12: Fraud Alert - Security Question Error Message

Step 4:

- 1. Retrieve the Security question and display to user.
- 2. User answer the question and click submit button.
- 3. BSNeBiz request FHP and Predator to validate the submitted answer.



- a. IF the response return "Yes", indicate the answer is correct, BSNeBiz will redirect user to step 5.
- b. IF the response return "No", indicate the answer is incorrect. BSNeBiz perform checking on error counting.
 - i. Unlocked BSNeBiz request FHP and Predator to return next Security question.
 - ii. Locked BSNeBiz throws error message "Access has been locked. Please contact BSNeBiz Contact Centre at 1300 88 1900 for assistance" and will redirect user to logout page.

| Security Question | What's your favourite pet? | |
|-------------------|----------------------------|--------|
| Answer* | | |
| | | Submit |
| | | |

Figure 15: Fraud Alert – Security Question screen

Display Specification:

| No | Field | Field Type | Description |
|----|-------------------|------------|------------------------------|
| 1. | Security Question | Text | Details of security question |

Table 13: Fraud Alert – Security Question Display Specification

Input Specification:

| No | Field | Field Type | Rule | Description | Required |
|----|--------|------------|--------------|---------------------------|----------|
| 1. | Answer | Text Box | Alphanumeric | Input answer for security | Yes |
| | | | | question | |

Table 14: Fraud Alert – Security Question Input Specification

Action:

| No | Action | Туре | Description | |
|----|--------|--------|---|--|
| 1. | Submit | Button | Contains an action to submit the security question to FHP and Predator to process response. | |
| 2. | Close | Button | Contains an action to close the security question | |
| | | | | |

Table 15: Fraud Alert - Security Question Action

List of available messages for the screen:

| No | Event | Error Description in English |
|----|--------------------|--------------------------------------|
| 1. | Submit empty field | Security Question answer is required |


| No | Event | Error Description in English |
|----|---|--|
| 2. | FHP and Predator return error incorrect | Security Question answer is incorrect |
| | answer | |
| 3. | FHP and Predator return user status | Access has been locked. Please contact BSNeBiz |
| | locked | Contact Centre at 1300 88 1900 for assistance |

Table 16: Fraud Alert - Security Question Error Message

Step 5:

1. BSNeBiz display NAD Registration result page.

| ₿BSN | | 👫 🛛 Log Out |
|---|--|-------------|
| Welcome, ADMM01779 | NAD Registration | |
| Your last login was on Thursday, 14 September 2023 10:00:34 | Result | |
| ff Home | Status : Successful | |
| (i) Maintenance > | DuitNow ID Type Business Registration No | |
| Det an NAD V | DuttNow ID 002904085-P | |
| NAD Registration NAD Maintenance | Receiving Account 12/2729000273728 | |
| 🧕 Merchant QR > | Reference No. 20230914000000072640 | |
| • | Transaction Date 1409/2023 | |
| | Transaction Time 10:00:50 | |
| | Back To DuitNow Registration | |
| | | |

Figure 16: NAD Registration – Result screen



2.2.4 SOW01.2d: Merchant QR

| Function ID | SOW01.2d | | | |
|-------------|---|------|---------|--|
| Module Name | Merchant QR | Path | BSNeBiz | |
| Description | Step-up authentication will be implemented to module that related with Merchant QR module. This step-up authentication will be redirected based on FHP and Predator analysis result. Below are Merchant QR module implemented with FHP and Predator enhancement: | | | |
| | a) Merchant Management i. Create ii. Edit iii. Delete iv. Activate v. Block | | | |

2.2.4.1 Process Flow



Diagram 4: NAD Registration Process Flow

2.2.4.2 Screen Flow

The Merchant QR – Merchant Management (Create) will be used as a sample for merchant QR screen flow with FHP and Predator.



Step 1:

- 1. CA login to BSNeBiz system.
- 2. Navigate to Merchant QR Merchant Management module.
- 3. Click on "Create" button.

| ₿BSN | | | | | 3間 - | Log Out |
|---|-------------------------------|-----------------------|-------------------------|--------|---------------------|---------|
| Welcome, ADMM01779 | DuitNow QR Merchant | | | | | _ |
| LOONG EXPRESS TRADING Your last login was on Wednesday, 20 September 2023 | Show 10 v entries | | | Searc | h: | |
| 15:54:47 | Action 🚽 Merchant ID | Merchant Name | Merchant Account Number | Status | Registration Date | |
| | View 1212729000273728A5567200 | LOONG EXPRESS TRADING | 1212729000273728 | Online | 20/09/2023 16:04:57 | |
| in Home | Showing 1 to 1 of 1 entries | | | | Previous 1 Next | |
| Maintenance > | | | | | Create | |
| Part NAD > | | | | | | |
| Det Merchant QR 🗸 🗸 | | | | | | |
| Merchant Management | | | | | | |
| Merchant Registration History | | | | | | |
| | | | | | | |

Figure 17: QR Merchant – Listing screen

Step 2:

- 1. BSNeBiz display favourite maintenance details page.
- 2. Enter required information for QR Merchant details.
- 3. Click "Next" button.



| | Detail |
|----------------------------|---|
| Payload Format Indicator * | Version 02 |
| Initiation Method * | QR Static Code |
| Merchant Descriptor | BSN Merchant QR |
| Mobile Number * | 01123584245 |
| AID | A0000006150001 |
| Merchant Account Number * | 1212729000273728 - Giro |
| Merchant Name * | LOONG EXPRESS TRADING |
| City * | Ajil |
| Country * | Malaysia |
| Email Address * | zakiah_mdzin@bsn.com.my |
| | ✓ I hereby agree to the terms and condition |

Figure 18: QR Merchant – Details screen

Step 3:

- 1. View details on the confirmation page.
- 2. Click on "Confirm" button.
- 3. BSNeBiz will call FHP and Predator to perform Risk Analysis process with require information.
- 4. BSNeBiz perform checking on action code from FHP and Predator analysis response:
 - a. IF risk analysis response action code **REJECT**, BSNeBiz will throws error message "You are not allows to create QR Merchant. Please contact BSNeBiz Contact Centre at 1300 88 1900 for assistance" and will redirect user to logout page.
 - b. IF risk analysis response action code is **OK** and user status is **APPROVE/UNLOCK**, a user is allows to skip the step-up authentication and the BSNeBiz will redirect user to result screen at step 5.
 - c. IF risk analysis response action code **STEPUP**, the BSNeBiz will pop up Security question screen for user to answer security question at next step 4.



| DuitNow QR | DuitNow QR Merchant | | | | |
|------------|--------------------------|--|--|--|--|
| | | | | | |
| | | Confirmation | | | |
| | | Commation | | | |
| | Payload Format Indicator | Version 02 | | | |
| | Initiation Method | QR Static Code | | | |
| | Merchant Descriptor | BSN Merchant QR | | | |
| | Mobile Number | 01123584245 | | | |
| | AID | A000006150001 | | | |
| | Merchant Account Number | 1212729000273728 | | | |
| | Merchant Name | LOONG EXPRESS TRADING | | | |
| | Address | Lot 32-8-9, TINGKAT 9 BANGUNAN JAYA, JALAN SULTAN ISMAIL | | | |
| | Post Code | 50450 | | | |
| | State | Terengganu | | | |
| | City | AJIL | | | |
| | Country | Malaysia | | | |
| | Email Address | zakiah_mdzin@bsn.com.my | | | |
| Back | | Confirm | | | |

Figure 19: QR Merchant – Confirmation screen

Error messages for the screen:

| No | Action Code | Error Description in English | |
|----|-------------|---|--|
| 1. | REJECT | Return error message "You are not allows to create QR Merchant. | |
| | | Please contact BSNeBiz Contact Centre at 1300 88 1900 for | |
| | | assistance". | |
| | | | |

Table 17: Fraud Alert - Security Question Error Message

Step 4:

- 1. Retrieve the Security question and display to user.
- 2. User answer the question and click submit button.
- 3. BSNeBiz request FHP and Predator to validate the submitted answer.
 - a. IF the response return "Yes", indicate the answer is correct, BSNeBiz will redirect user to step 5.



- b. IF the response return "No", indicate the answer is incorrect. BSNeBiz perform checking on error counting.
 - i. Unlocked BSNeBiz request FHP and Predator to return next Security question.
 - ii. Locked BSNeBiz throws error message "Access has been locked. Please contact BSNeBiz Contact Centre at 1300 88 1900 for assistance" and will redirect user to logout page.

| Security Question | What's your favourite pet? |
|-------------------|----------------------------|
| | Submit |

Figure 20: Fraud Alert – Security Question screen

Display Specification:

| No | Field | Field Type | Description |
|----|-------------------|------------|------------------------------|
| 1. | Security Question | Text | Details of security question |

Table 18: Fraud Alert – Security Question Display Specification

Input Specification:

| No | Field | Field Type | Rule | Description | Required |
|----|--------|------------|--------------|---------------------------|----------|
| 1. | Answer | Text Box | Alphanumeric | Input answer for security | Yes |
| | | | | question | |

Table 19: Fraud Alert – Security Question Input Specification

Action:

| 1.SubmitButtonContains an action to submit the security qui | auaction to |
|--|-------------|
| | question to |
| FHP and Predator to process response. | |
| 2. Close Button Contains an action to close the security que | uestion |

Table 20: Fraud Alert - Security Question Action

List of available messages for the screen:

| No | Event | Error Description in English |
|----|---|---------------------------------------|
| 1. | Submit empty field | Security Question answer is required |
| 2. | FHP and Predator return error incorrect | Security Question answer is incorrect |
| | answer | |



| No | Event | Error Description in English |
|----|-------------------------------------|--|
| 3. | FHP and Predator return user status | Access has been locked. Please contact BSNeBiz |
| | locked | Contact Centre at 1300 88 1900 for assistance |

Table 21: Fraud Alert - Security Question Error Message

Step 5:

1. BSNeBiz display QR Merchant result page.

| DuitNow QR Merchant | | | |
|--------------------------|--------------------------|------------------------------|--|
| | Result | | |
| | Status : Successful | | |
| Payload Format Indicator | Version 02 | | |
| Initiation Method | QR Static Code | | |
| Merchant Descriptor | BSN Merchant QR | | |
| Mobile Number | 01123584245 | | |
| AID | A0000006150001 | | |
| Merchant ID | 1212729000273728A5567200 | | |
| Merchant Account Number | 1212729000273728 | | |
| Merchant Name | LOONG EXPRESS TRADING | | |
| City | AJIL | | |
| Country | Malaysia | | |
| Email Address | zakiah_mdzin@bsn.com.my | | |
| UK Code | | | |
| Print QR Code | | Back to Merchant Maintenance | |

Figure 21: QR Merchant – Result screen



2.2.5 SOW01.2e: Account Summary

| Module Name Account Summary Path BSNeBiz/ Account Summary Description Step-up authentication will be implemented to module that related with account summary module. This step-up authentication will be redirected based on FHP and Predator analysis result. Below are type of account summary module implemented with FHP and Predator enhancement: a) GIRO Accounts | Function ID | SOW01.2e | | | | | | |
|---|-------------|--|--|---|--|--|--|--|
| Description Step-up authentication will be implemented to module that related with account summary module. This step-up authentication will be redirected based on FHP and Predator analysis result. Below are type of account summary module implemented with FHP and Predator enhancement: a) GIRO Accounts | Module Name | Account Summary | nmary Path BSNeBiz/ Account Summary | | | | | |
| c) GIRO-i Premium Accounts d) Fixed Investment Accounts e) Loan Accounts f) Corporate Accounts | Description | Step-up authentication will f summary module. This step-of Predator analysis result. Below are type of account s enhancement: a) GIRO Accounts b) GIRO-i Account c) GIRO-i Premiun d) Fixed Investmen e) Loan Accounts f) Corporate Acco | oe implei up authe ummary s n Account nt Accour unts | mented to module that related with account ntication will be redirected based on FHP and module implemented with FHP and Predator ts | | | | |

2.2.5.1 Process Flow



Diagram 5: Account Summary Process Flow



2.2.5.2 Screen Flow

The GIRO Account will be used as a sample for account summary screen flow with FHP and Predator.

Step 1:

- 1. User access to BSNeBiz Landing page and clicks "Account Summary" continued with "All Accounts".
- 2. BSNeBiz System retrieves Account Summary Details from Host System by CIS No. and displays Account Summary for Holding Company & subsidiary company if any.

| ₿BSN | | 📌 Log Out |
|--|---|-----------|
| Your last login was on Monday, 21 August 2023 11:44:50 | | > |
| ff Home | GIRO Account(s) GIRO Account(s) GIRO Account(s) GIRO Account(s) RM3,098,522.09 45% RM484.75 RM484.75 RM484.75 | |
| Account Summary > | | |
| ←IS Transfer & > SI → Payment | Recent Activities | _ |
| 🐨 JomPAY > | Show 10 v entries Search: | |
| DuitNow > | Date Time Transaction Type From Account Amount Status | • |
| Standing > Instructions | 17/08/2023 17:23:42 Own Account Transfer 1413629100000437 RM10.00 Pending Approval 0099929100000375 | |
| Auto Debit > | 16/08/2023 22:49:09 New Interbank Transfer 0099929100000375 RM10.00 Pending Approval 5000040430 | |
| Statutory Body - | 16/08/2023 08:18:34 New Interbank Transfer 0099929100000375 RM6.00 Pending Approval 5000040430 | |
| EPF | 14/08/2023 19:07:16 New Interbank Transfer 14/362910000437 RM10.00 Pending Approval | _ |
| Statutory Body - > LHDN | | _ |

Figure 22: Home screen – Giro Account

Step 2:

- 1. User clicks "View Details" button on selected account.
- 2. BSNeBiz will call FHP and Predator to perform Risk Analysis process with require information.
- 3. BSNeBiz perform checking on action code from FHP and Predator analysis response;
 - a. IF risk analysis response action code **REJECT**, BSNeBiz will throws error message "You are not allows to view details of this account. Please contact BSNeBiz Contact Centre at 1300 88 1900 for assistance" and will redirect user to logout page.
 - b. IF risk analysis response action code is **OK** and user status is **APPROVE/UNLOCK**, a user is allows to skip the step-up authentication and the BSNeBiz will redirect user to result screen at step 4.
 - c. IF risk analysis response action code **STEPUP**, the BSNeBiz will pop up Security question screen for user to answer security question at next step 3.



| ₿BSN | | 🞢 🛛 Log Out |
|---|--|-------------|
| Your last login was on Monday, 21 August 2023 11:44:50 | GIRO Accounts GIRO - Accounts GIRO - Premium Accounts Fixed Investment Accounts Loan Accounts Corporate Card | |
| Home | DT ACADEMY SDN BHD RM3,004,424.00 | |
| All Accounts GIRO Accounts GIRO-i Accounts | View Details | |
| GIRO-i Premium Accounts Fixed Investment | HAKIKI BIN MALIKI RM187.09 | |
| Accounts Loan Accounts Corporate Card Account Validation | 1413629100000437 View Details | |
| ← B D→ Transfer & > Payment | PERWIRA RM93,911.00 | |
| DuitNow > | View Details | |

Figure 23: Account Summary screen – Giro Account

Error messages for the screen:

| No | Action Code | Error Description in English |
|----|--|--|
| 1. | REJECT | Return error message "You are not allows to view details of this |
| | account. Please contact BSNeBiz Contact Centre at 1300 88 1900 | |
| | | assistance". |

Table 22: Fraud Alert - Return Error Message

Step 3:

- 1. Retrieve the Security question from FHP and Predator and display to user.
- 2. Customer Answer the question and click submit button.
- 3. BSNeBiz request FHP and Predator to validate the submitted answer.
 - a) IF the response return "YES", indicate the answer is correct, BSNeBiz will redirect customer to step 4.
 - b) IF the response return "NO", indicate the answer is incorrect. BSNeBiz perform checking on FHP and Predator user status:
 - i. Unlocked BSNeBiz request FHP and Predator to return next Security question.
 - ii. Locked BSNeBiz throws error message "Access has been locked. Please contact BSNeBiz Contact Centre at 1300 88 1900 for assistance" and will redirect user to logout page.



| Security Question | What's your favourite pet? |
|-------------------|----------------------------|
| | Submit |

Figure 24: Security Question screen

Display Specification:

| No | Field | Field Type | Description |
|----|-------------------|------------|------------------------------|
| 1. | Security Question | Text | Details of security question |

Table 23: Fraud Alert – Security Question Display Specification

Input Specification:

| No | Field | Field Type | Rule | Description | Required |
|----|--------|------------|--------------|---------------------------|----------|
| 1. | Answer | Text Box | Alphanumeric | Input answer for security | Yes |
| | | | | question | |

Table 24: Fraud Alert – Security Question Input Specification

Action:

| No | Action | Туре | Description |
|----|--------|--------|---|
| 1. | Submit | Button | Contains an action to submit the security question to FHP and Predator to process response. |
| 2. | Close | Button | Contains an action to close the security question |

Table 25: Fraud Alert - Security Question Action

List of available messages for the screen:

| No | Event | Error Description in English |
|----|---|--|
| 1. | Submit empty field | Security Question answer is required |
| 2. | FHP and Predator return error incorrect | Security Question answer is incorrect |
| | answer | |
| 3. | FHP and Predator return user status | Access has been locked. Please contact BSNeBiz |
| | locked | Contact Centre at 1300 88 1900 for assistance |

Table 26: Fraud Alert - Security Question Error Message

Step 4:

1. BSNeBiz System retrieve the information from Host and display the Account details screen.



| ₿BSN | | 🎢 🛛 Log Out |
|--|---|-------------|
| Your last login was on Monday, 21 August 2023 11:44:59 | Account Details | |
| ≗⊠∘≙♥► | Account Details Balance Inquiry Transaction History BSNeBiz History e-Statement | |
| 1 Home | | |
| Account Summary 🗸 | 8 - | |
| All Accounts | Account Number 1410029100002381 | |
| GIRO Accounts GIRO-i Accounts | Account Status AKTIF | |
| GIRO-i Premium Accounts | Account Holder Name DT ACADEMY SDN BHD | |
| Fixed Investment Accounts | Account Type Giro | |
| Loan Accounts Corporate Card | Available Balance RM3,004,424.00 | |
| Account Validation | Ledger Balance RM3,004,424.00 | |
| G→ Transfer & > Payment | Freeze Amount RM500.00 | |
| 劉 JomPAY > | Back | |
| DuitNow > | | |

Figure 25: Account Details screen



2.2.6 SOW01.2f: Sweeping Account

| Function ID | SOW01.2f | | | | | | |
|-------------|--|---|---|--|--|--|--|
| Module Name | Sweeping Account | Path | BSNeBiz/Sweeping Account | | | | |
| Description | Step-up authentication will be account module. This step-up Predator analysis result. Below are type of sweeping a enhancement: a) Sweeping Accou | e implen authen account nt – Add | nented to module that related with sweeping tication will be redirected based on FHP and module implemented with FHP and Predator | | | | |
| | b) Sweeping Account – Edit c) Sweeping Account - Delete | | | | | | |

2.2.6.1 Process Flow



Diagram 6: Sweeping Account Process Flow

2.2.6.2 Screen Flow

Sweeping Account – Edit will be used as a sample for sweeping account screen flow with FHP and Predator.

Step 1:

- 1. Corporate User access to BSNeBiz Landing page and clicks on the "Sweeping Account" navigation. System displays the Sweeping Account Maintenance Listing page.
- 2. Click on Edit button.

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| ₿BSN | 21 LogOu |
|-------------------------------------|---|
| Auto Debit > | Sweeping Account Maintenance New |
| 😚 Bulk Payment > | Show 10 v entries Search: |
| Statutory Body - > EPF | Sequence Main Account Deficit: Transfer From Surplus: Transfer To Min Balance Max Balance Updated By Updated Date |
| Statutory Body - > | 1 061004110000586 1410029100002381 0099941100000286 800.00 11000.00 VOCMAKER03 29/04/2022 11:18:13 |
| | 2 0099941100000286 0610041100000586 1410029100002381 9000.00 10000.00 VOCMAKER03 29/04/2022 11:18:13 |
| C Reports & Data | Showing 1 to 2 of 2 entries Previous 1 Next |
| Statutory Body - > SOCSO | Edit |
| Statutory Body - > ZAKAT | |
| O Merchant Report | |
| Sweeping Account 🗸 | |
| Sweeping Account Maintenance New | |
| Sweeping Account History | |
| • | |

Figure 26: Sweeping Account Maintenance screen

Step 2:

- 1. BSNeBiz display Sweeping Account Maintenance Edit screen.
- 2. Click on 'Add' button to add new setup for Sweeping Account.
- 3. Click on 'Submit' button to continue to the next page.

| ₿BSN | | 🚰 Log Out |
|-------------------------------------|--|-----------|
| Auto Debit > | Sweeping Account Maintenance - Edit Payment Account | |
| 💣 Bulk Payment > | | |
| Statutory Body - > | Detail | |
| Statutory Body - > | | - 11 |
| O Reports & Data | Action Sequence wall Account Deficit. If answer from Suppos. If answer 10 will balance walk balance 1 1410029100002381 1410029100002381 Please select- \$ 800.00 11000.00 | |
| Statutory Body - > SOCSO | □ 2Please select ♥ 1410029100002381 ♥ 9000.00 10000.00 | |
| Statutory Body - > ZAKAT | Delete | Add |
| O Merchant Report | 4 Back Next | |
| Sweeping Account 🗸 | | |
| Sweeping Account Maintenance New | | |
| Sweeping Account History | | |
| | | |

Figure 27: Sweeping Account Maintenance - Edit screen

Step 3:

- 1. BSNeBiz proceed to the Confirmation page screen.
- $\ \ 2. \ \ Click \ on \ Confirm \ button \ to \ proceed \ with \ the \ creation.$
- 3. BSNeBiz will call FHP and Predator to perform Risk Analysis process with require information.

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- 4. BSNeBiz perform checking on action code from FHP and Predator analysis response:
 - a. IF risk analysis response action code **REJECT**, BSNeBiz will throws error message "You are not allows to perform this creation. Please contact BSNeBiz Contact Centre at 1300 88 1900 for assistance" and will redirect user to logout page.
 - b. IF risk analysis response action code is **OK** and user status is **APPROVE/UNLOCK**, a user is allows to skip the step-up authentication and the BSNeBiz will redirect user to result screen at step 5.
 - c. IF risk analysis response action code **STEPUP**, the BSNeBiz will pop up Security question screen for user to answer security question at next step 4.

| ₿BS | N | | | | | | | | 💏 🛛 Log Out |
|------------------|----------------------------|---|-----|----------------|-----------------------|------------------------|----------------------|-------------|-------------|
| Aut | to Debit | > | Swe | eeping Account | Maintenance - Edit Pa | ayment Account | | | |
| 6 Bull | ik Payment | > | | | | | | | |
| Star EPF | atutory Body - 🛛 | > | | | | Confirma | tion | | |
| Stat | atutory Body - S DN | > | Ы | Sequence | Main Account | Deficit: Transfer From | Surplus: Transfer To | Min Balance | Max Balance |
| O Rep | ports & Data | | 1.1 | 1 | 1410029100002381 | 1418041100000094 | 1418041100000094 | 800.00 | 800.00 |
| Stat | atutory Body - 3 OCSO | > | - | 2 | 0099929100000375 | 1418041100000094 | 1413629100000437 | 100.00 | 100.00 |
| Stal | itutory Body - S KAT | > | | Back | | | | | Confirm |
| O Mer | rchant Report | | | | | | | | |
| O Swe | reeping Account | ~ | | | | | | | |
| Sweep Mainte | ping Account enance New | | | | | | | | |
| Sweep History | ping Account Y | | | | | | | | |
| | < | | | | | | | | |

Figure 28: Sweeping Account Maintenance – Confirmation screen

Error messages for the screen:

| 1. REJECT Return error message "You are not allows | to perform this creation. |
|--|---------------------------|
| Please contact BSNeBiz Contact Centre at | 1300 88 1900 for |
| assistance". | |

Table 27: Fraud Alert - Return Error Message

Step 4:

- 1. Retrieve the Security question from FHP and Predator and display to user.
- 2. Customer Answer the question and click submit button.
- 3. BSNeBiz request FHP and Predator to validate the submitted answer.



- a) IF the response return "YES", indicate the answer is correct, BSNeBiz will redirect customer to step 5.
- b) IF the response return "NO", indicate the answer is incorrect. BSNeBiz perform checking on FHP and Predator user status:
 - i. Unlocked BSNeBiz request FHP and Predator to return next Security question.
 - Locked BSNeBiz throws error message "Access has been locked. Please contact BSNeBiz Contact Centre at 1300 88 1900 for assistance" and will redirect user to logout page.

| Security Question | What's your favourite pet? | |
|-------------------|----------------------------|--------|
| Answer* | | |
| | | Submit |
| | | |

Figure 29: Security Question screen

Display Specification:

| No | Field | Field Type | Description |
|----|-------------------|------------|------------------------------|
| 1. | Security Question | Text | Details of security question |

Table 28: Fraud Alert – Security Question Display Specification

Input Specification:

| No | Field Field Type | | Rule | Description | Required |
|----|------------------|--|--------------|---------------------------|----------|
| 1. | Answer Text Box | | Alphanumeric | Input answer for security | Yes |
| | | | | question | |

Table 29: Fraud Alert – Security Question Input Specification

Action:

| No | Action | Туре | Description | |
|----|---------------|--------|---|--|
| 1. | Submit Button | | Contains an action to submit the security question to | |
| | | | FHP and Predator to process response. | |
| 2. | Close | Button | Contains an action to close the security question | |

Table 30: Fraud Alert - Security Question Action

List of available messages for the screen:

| No | Event | Error Description in English | | |
|----|--------------------|--------------------------------------|--|--|
| 1. | Submit empty field | Security Question answer is required | | |



| No | Event | Error Description in English | | |
|----|---|--|--|--|
| 2. | FHP and Predator return error incorrect | Security Question answer is incorrect | | |
| | answer | | | |
| 3. | FHP and Predator return user status | Access has been locked. Please contact BSNeBiz | | |
| | locked | Contact Centre at 1300 88 1900 for assistance | | |

Table 31: Fraud Alert - Security Question Error Message

Step 5:

1. BSNeBiz displays the Result page screen.

| ₿BSN | | | | | | | 💏 Log Out |
|-----------------------------|-----|---------------|-----------------------------|------------------------|----------------------|---------------|-------------|
| Standing Instructions | > | Sweeping A | ccount Maintenance - Edit F | ayment Account | | | |
| 🥩 Auto Debit | > | | | | | | |
| 💣 Bulk Payment | > | | | Re | sult | | |
| Statutory Body - EPF | > | | Status | | | Pending A | Approval |
| Statutory Body - | > | | Reference No. | | | 2023082100000 | 0071625 |
| Reports & Data | | | Transaction Date | | | 21 | /08/2023 |
| Statutory Body - SOCSO | > | | Transaction Time | | | | 12:23:30 |
| Statutory Body - | > | | | | | | |
| O Merchant Report | | Sequen | ice Main Account | Deficit: Transfer From | Surplus: Transfer To | Min Balance | Max Balance |
| | | 1 | 1410029100002381 | 1418041100000094 | 1418041100000094 | 800.00 | 800.00 |
| Sweeping Account | . · | 2 | 0099929100000375 | 1418041100000094 | 1413629100000437 | 100.00 | 100.00 |
| Maintenance New | | 4 | | | | | |
| Sweeping Account History | | Print receipt | | | | | Back |

Figure 30: Sweeping Account Maintenance – Add Result screen

Status might be different depending on the organization setup. For workflow company, the status will be **Pending Verify or **Pending Approval**. For non-workflow company, the status will be **Successful**.



2.2.7 SOW01.2g: Login

| Function ID | SOW01.2g | | |
|-------------|--|---------------------------------|---|
| Module Name | Login | Path | BSNeBiz/Login |
| Description | Step-up authentication will be in This step-up authentication will result. Below are type of role for enhancement: a) Initiator b) Verifier c) Approver d) Single User | impleme ill be re login m | ented to module that related with login module. edirected based on FHP and Predator analysis nodule implemented with FHP and Predator |

2.2.7.1 Process Flow



Diagram 7: Login Process Flow

2.2.7.2 Screen Flow

Initiator role will be used as a sample for login screen flow with FHP and Predator.

Step 1:

1. The existing BSNeBiz user login as BAU process.

2. Input username and click Next button, BSNeBiz validate and display security phrase. LAST UPDATED: 21 September 2023 VER.00





Figure 31: Login screen

Step 2:

- 1. Users verify the security phrase and tick on "Yes, this is my security phrase".
- 2. User input password and click on "Login" button.
- 3. BSNeBiz will validate the submitted password.
 - a) IF password is invalid, inform fail to login to FHP and Predator and proceed to retry login process.
 - b) IF password is correct, BSNeBiz will proceed to the Risk Analysis process and perform checking on action code and user status from the analysis response
 - IF risk analysis response action code **REJECT**, BSNeBiz will throws error message "Unauthorized Login. Please contact BSNeBiz Contact Centre at 1300 88 1900 for assistance".
 - ii. IF risk analysis response action code **OK** and FHP and Predator user status is **APPROVE/UNLOCK**, proceed to step 4.
 - iii. IF risk analysis response **STEPUP**, BSNeBiz will route the user to step 3 to answer Security question.





Figure 32: Login screen

Error messages for the screen:

| No | Action Code | Error Description in English |
|----|-------------|--|
| 1. | REJECT | Return error message "Unauthorized Login. Please contact BSNeBiz |
| | | Contact Centre at 1300 88 1900 for assistance" |

Table 32: Fraud Alert - Security Question Error Message

Step 3:

- 1. Retrieve the Security question from FHP and Predator and display to user.
- 2. Customer Answer the question and click submit button.
- 3. BSNeBiz request FHP and Predator to validate the submitted answer.
 - a) IF the response return "YES", indicate the answer is correct, BSNeBiz will redirect customer to step 4.
 - b) IF the response return "NO", indicate the answer is incorrect. BSNeBiz perform checking on FHP and Predator user status
 - i. Unlocked BSNeBiz request FHP and Predator to return next Security question.
 - ii. Locked BSNeBiz throws error message "Access has been locked. Please contact BSNeBiz Contact Centre at 1300 88 1900 for assistance" and will redirect user to logout page.



| Security Question | What's your favourite pet? |
|-------------------|----------------------------|
| | Submit |



Display Specification:

| No | Field | Field Type | Description |
|----|-------------------|------------|------------------------------|
| 1. | Security Question | Text | Details of security question |

Table 33: Fraud Alert – Security Question Display Specification

Input Specification:

| No | Field | Field Type | Rule | Description | Required |
|----|--------|------------|--------------|---------------------------|----------|
| 1. | Answer | Text Box | Alphanumeric | Input answer for security | Yes |
| | | | | question | |

Table 34: Fraud Alert – Security Question Input Specification

Action:

| No | Action | Туре | Description |
|----|--------|--------|---|
| 1. | Submit | Button | Contains an action to submit the security question to FHP and Predator to process response. |
| 2. | Close | Button | Contains an action to close the security question |

Table 35: Fraud Alert - Security Question Action

List of available messages for the screen:

| No | Event | Error Description in English | |
|----|---|--|--|
| 1. | Submit empty field | Security Question answer is required | |
| 2. | FHP and Predator return error incorrect | Security Question answer is incorrect | |
| | answer | | |
| 3. | FHP and Predator return user status | Access has been locked. Please contact BSNeBiz | |
| | locked | Contact Centre at 1300 88 1900 for assistance | |

Table 36: Fraud Alert - Security Question Error Message

Step 4:

1. BSNeBiz display home page.





Figure 34: Homepage screen



2.2.8 SOW01.2h: First Time Login (FTL)

| Function ID | SOW01.2h | | | |
|-------------|--|-----------------------|--------------------------|--|
| Module Name | First Time Login | Path | BSNeBiz/First Time Login | |
| Description | First Time Login module will allow a user to set security questions and update the FHP and Predator Security Questions for step-up authentication. Below are user type for first time login module implemented with FHP and Predator enhancement: | | | |
| | a) Corporate b) Corporate | Administrator User | | |

2.2.8.1 Process Flow





2.2.8.2 Screen Flow

Step 1:

- 1. Customer complete perform registration and activation process at BSNeBiz Application.
- 2. Accesses to First Time Login Selection from the Login screen of BSNeBiz System.





Figure 35: Login screen

Step 2:

1. User tick on "YES, I agree..." to accept the Terms and Conditions of the usage and clicks on the "Continue" button.



| First Time Login | | |
|---|---|---------------------------------------|
| | | |
| | Terms & Conditions | |
| Terms & Conditions | | |
| = cukxzg0KZW5kc3RyZWFtDQplbmRvYmoNCnhyZWYNCj | 1 / 8 - 80% + 🗄 🖏 🛓 | e : |
| Image: Section of the section of t | <section-header><section-header> DEMOMINICATION OF DESIDENT DEMOMINICATION OF DEMOMINICATION OF DEMOMINICATION OF DESIDENT DEMOMINICATION OF DEMOM</section-header></section-header> | · · · · · · · · · · · · · · · · · · · |
| Cancel | | Continue |

Figure 36: FTL – Terms & Conditions screen

Step 3:

1. User clicks on the "Corporate Administrator" or "Corporate User" button based on user's user type to proceed to the next step.



Figure 37: FTL - User Type screen



Step 4:

- 1. User inputs Username and temporary password and clicks on the "Next" button.
- 2. BSNeBiz System validates Username and Password. After successful validation, BSNeBiz System will display First time Login Register Password screen.

| ₿BSN | (k) | Login |
|------------------|------------|-------|
| First Time Login | | |
| | |] |
| | Credential | |
| Username* | | |
| Temporary PIN* | | |
| Back | Next | |
| | | |
| | | |



Step 5:

- 1. User inputs New Password and Confirm Password in the Password Reset screen and clicks on the "Next" button.
- 2. BSNeBiz System saves the New Password to IB Database then redirects user to the Register Password page.

| ₿BSN | | 🛃 Login |
|-----------------------------|---|---------|
| First Time Login | | |
| 1 | | |
| | Register Password | |
| Password complexity MUST in | clude at least 1 number, 1 special character, 1 upper and 1 lower case alphabet characters. Supported special character @#\$%^&+= | |
| | | |
| New Password* 0 | Cccc@1111 | ۲ |
| Confirm New Password* | Cccc@1111 | ۲ |
| Back | | Next |
| | | |
| | | |
| | | |
| | | |





Step 6:

- 1. User inputs the Security Phrase, then clicks on the "Next" button.
- 2. BSNeBiz System saves the Security Image and Phrase to IB Database and then redirects to the Security Question page.

| ₿BSN 🚱 | Login |
|---|-------|
| First Time Login | |
| | |
| Security Phrase | |
| Please Login to BSNeBiz | |
| Please provide a phrase that you can easily remember. DO NOT use your actual password for the security phrase. | |
| Security Phrase* Cccc@1111 | |
| Back | ĺ |
| | |
| | |
| | |

Figure 40: FTL - Security Phrase screen

Step 7:

- 1. BSNeBiz will retrieve the list of Security question and display to user.
- 2. After user select provided Security question and input the answer, click the "Next" button.
- 3. BSNeBiz will validate the submitted selected security questions.
- 4. BSNeBiz will send the submitted Question and Answer to FHP and Predator and checking the risk analysis response from FHP and Predator.
 - a. IF risk analysis response action code **REJECT**, BSNeBiz will throws error message unsuccessful.
 - b. IF risk analysis response action code **OK**, BSNeBiz will update require information to FHP and Predator and display result page at step 8.



| st Time Login | | |
|--|-------------------------------------|------|
| | | |
| | Register Security Question | |
| If you are Single User or App please proceed to perform D | over vice Pairing before Login | |
| Security Question 1* | What's your favourite pet? | ~ |
| Answer 1* | cat | |
| Confirm Answer 1* | cat | |
| Security Question 2* | Where is your birth place? | ~ |
| Answer 2* | kedah | |
| Confirm Answer 2* | kedah | |
| Security Question 3* | | |
| Answer 3* | vinat is your primary school name / | • |
| Confirm Answer 3* | SXX | |
| | um . | |
| Back | | Next |

Figure 41: FTL - Register Security Question

Input Specification:

| No | Field | Field Type | Rule | Description | Required |
|----|---------------------|------------|----------------|----------------------------|----------|
| 1. | Security Question 1 | Dropdown | N/A | Select Security Question 1 | Yes |
| 2. | Answer 1 | Text | N/A | Input Security Answer 1 | Yes |
| 3. | Confirm Answer 1 | Text | Match Answer 1 | Input Confirm Security | Yes |
| | | | | Answer 1 | |
| 4. | Security Question 2 | Dropdown | N/A | Select Security Question 2 | Yes |
| 5. | Answer 2 | Text | N/A | Input Security Answer 2 | Yes |
| 6. | Confirm Answer 2 | Text | Match Answer 2 | Input Confirm Security | Yes |
| | | | | Answer 2 | |
| 7. | Security Question 3 | Dropdown | N/A | Select Security Question 3 | Yes |
| 8. | Answer 3 | Text | N/A | Input Security Answer 3 | Yes |
| 9. | Confirm Answer 3 | Text | Match Answer 3 | Input Confirm Security | Yes |
| | | | | Answer 3 | |

Table 37: FTL Security Question and Security Answer Input Specification



Action:

| No | Action | Туре | Description | | |
|----|--------|--------|---|--|--|
| 1. | Next | Button | Contain an action that saves the Security Data | | |
| 2. | Back | Button | Contain an action that goes back to the previous page | | |
| | | | | | |

Table 38: FTL Security Question and Security Answer Action

List of available messages for the screen:

| No | Event | Error Description in English |
|----|-----------------------------------|---|
| 1. | Submit empty field | Security Question 1 is required |
| | | Answer 1 is required |
| | | Security Question 2 is required |
| | | Answer 2 is required |
| | | Security Question 3 is required |
| | | Answer 3 is required |
| 2. | Submit empty confirm answer/wrong | Answer 1 must be the same as Confirm answer |
| | confirm answer | 1 |
| | | Answer 2 must be the same as Confirm answer |
| | | 2 |
| | | • Answer 3 must be the same as Confirm answer |
| | | 3 |
| 3. | FHP and Predator return REJECT | Return error message "First Time Login is |
| | | unsuccessful. Please contact BSNeBiz Contact |
| | | Centre at 1300 88 1900 for assistance" |

Table 39: FTL Security Question and Security Answer Error Message

Step 8:

1. BSNeBiz System displays the result page. User can go back to the Login screen by clicking on the "Proceed to Login" button.



| ∯ BSN | K- Login |
|--|----------|
| First Time Login | |
| | |
| Congratulation! Please Login to BSNeBiz If you are Single User or Approver please proceed to perform Device Pairing before Login Proceed to Login | |
| | |
| | |

Figure 42: FTL - Result screen



2.2.9 SOW01.2i: Activate Token

| Function ID | SOW01.2i | | | |
|-------------|--|----------------------|--|--|
| Module Name | Activate Token | Path | BSNeBiz/Activate Token | |
| Description | Step-up authentication will be i module. This step-up authent analysis result. | impleme ication \ | nted to module that related with activate token will be redirected based on FHP and Predator | |

2.2.9.1 Process Flow



Diagram 9: Activate Token Process Flow

2.2.9.2 Screen Flow

Step 1:

1. BSNeBiz user access to Activate New Secure Pass Screen. BSNeBiz System display Activate New Secure Pass Screen.





Figure 43: Login screen

Step 2:

1. User input Username & Password, and clicks "Next" button, or click 'Cancel' button to cancel the Token Activation.

| ₿BSN | C- Login |
|-----------------------|----------|
| Token Activation | |
| | |
| Username and Password | |
| Username* | |
| Password* | |
| Cancel | |
| | |
| | |

Figure 44: Token Activation - Username and Password

Step 3:

- 1. User is required to input the Security Token Serial No. and OTP
- 2. User clicks on the "Next" button.
- 3. BSNeBiz System validates the Serial No.

```
LAST UPDATED: 21 September 2023
VER.00
```



- a. IF Serial No. is invalid, inform fail to activate token to FHP and Predator and proceed to retry activation process.
- b. IF Serial No. valid, BSNeBiz will proceed to the Risk Analysis process and perform checking on action code and user status from the analysis response
 - i. IF risk analysis response action code **REJECT**, BSNeBiz will throws error message "You are not allowed to activate token. Please contact BSNeBiz Contact Centre at 1300 88 1900 for assistance".
 - ii. IF risk analysis response action code **OK** and FHP and Predator user status is **APPROVE/UNLOCK**, proceed to step 5 and BSNeBiz system will link the UPASS application to the user and activate the UPASS application. Subsequently, proceed to Reset Password Screen.
 - iii. IF risk analysis response **STEPUP**, BSNeBiz will route the user to step 4 to answer Security question.

| ₿BSN | | C- Logi | n |
|--------------------------|--------------------|---------|---|
| Token Activation | | | |
| | | | |
| | | | |
| | Token Registration | | |
| Country Tokon Coriel No. | | _ | |
| Security Token Senal No. | | | |
| OTP: | | | |
| Back | Next | - I. | |
| | | - 1 | |
| | | | |
| | | | |
| | | | |

Figure 45: Security Token Activation screen

Error messages for the screen:

| No | Action Code | Error Description in English |
|----|-------------|--|
| 1. | REJECT | Return error message "Access has been locked. Please contact |
| | | BSNeBiz Contact Centre at 1300 88 1900 for assistance". |

Table 40: Fraud Alert - Security Question Error Message

Step 4:

- 1. Retrieve the Security question from FHP and Predator and display to user.
- 2. Customer Answer the question and click submit button.



- 3. BSNeBiz request FHP and Predator to validate the submitted answer.
 - a) IF the response return "YES", indicate the answer is correct, BSNeBiz will redirect customer to step 5.
 - b) IF the response return "NO", indicate the answer is incorrect. BSNeBiz perform checking on FHP and Predator user status
 - i. Unlocked BSNeBiz request FHP and Predator to return next Security question.
 - Locked BSNeBiz throws error message "Access has been locked. Please contact BSNeBiz Contact Centre at 1300 88 1900 for assistance" and will redirect user to logout page.

| Security Question | What's your favourite pet? | |
|-------------------|----------------------------|--------|
| Answer* | | |
| | | Submit |
| | | |

Figure 46: Security Question screen

Display Specification:

| No | Field | Field Type | Description |
|----|-------------------|------------|------------------------------|
| 1. | Security Question | Text | Details of security question |

Table 41: Fraud Alert – Security Question Display Specification

Input Specification:

| No | Field | Field Type | Rule | Description | Required |
|----|--------|------------|--------------|---------------------------|----------|
| 1. | Answer | Text Box | Alphanumeric | Input answer for security | Yes |
| | | | | question | |

Table 42: Fraud Alert – Security Question Input Specification

Action:

| No | Action | Туре | Description | |
|----|--------|----------|---|--|
| 1. | Submit | Button | Contains an action to submit the security question to EHP and Predator to process response. | |
| | | - | | |
| 2. | Close | Button | Contains an action to close the security question | |

Table 43: Fraud Alert - Security Question Action

List of available messages for the screen:

| No | Event | Error Description in English |
|----|--------------------|--------------------------------------|
| 1. | Submit empty field | Security Question answer is required |



| No | Event | Error Description in English | |
|----|---|--|--|
| 2. | FHP and Predator return error incorrect | Security Question answer is incorrect | |
| | answer | | |
| 3. | FHP and Predator return user status | Access has been locked. Please contact BSNeBiz | |
| | locked | Contact Centre at 1300 88 1900 for assistance | |

Table 44: Fraud Alert - Security Question Error Message

Step 5:

1. BSNeBiz System displays the result to IB User. IB User can go back to the Login screen by clicking on the "Proceed to Login" button.

| ₿BSN 🚱 | | | |
|--------|--|--|--|
| | Token Activation | | |
| | | | |
| | | | |
| | Result | | |
| | | | |
| | | | |
| | Successful | | |
| | Your security token has been successfully activated. | | |
| | Proceed to Login | | |
| | | | |
| | | | |
| | | | |

Figure 47: Security Token Result screen

2.2.10 SOW01.2j: Device Pairing

| Function ID | SOW01.2j | | | | |
|-------------|---|------|------------------------|--|--|
| Module Name | Device Pairing | Path | BSNeBiz/Device Pairing | | |
| Description | Step-up authentication will be implemented to module that related with device pairing module. This step-up authentication will be redirected based on FHP and Predator analysis result. | | | | |

2.2.10.1 Process Flow



Diagram 10: Device Pairing Process Flow

2.2.10.2 Screen Flow

Step 1:

1. BSNeBiz user accessing to Device Pairing Screen.




Figure 48: Login screen

Step 2:

- 1. User input Username & Password, and clicks on the "Next" button, or click on the 'Cancel' button to cancel Mobile Activation.
- 2. BSNeBiz System validates Username and Password.
 - a. IF Username & Password is invalid, inform fail to activate mobile token to FHP and Predator and proceed to retry input Username & Password.
 - b. IF Username & Password valid, BSNeBiz will proceed to the Risk Analysis process and perform checking on action code and user status from the analysis response:
 - i. IF risk analysis response action code **REJECT**, BSNeBiz will throws error message "You are not allowed to activate mobile token. Please contact BSNeBiz Contact Centre at 1300 88 1900 for assistance".
 - ii. IF risk analysis response action code OK and FHP and Predator user status is APPROVE/UNLOCK, proceed to step 4 and user proceed to mobile device and login to mobile token apps.
 - iii. IF risk analysis response **STEPUP**, BSNeBiz will route the user to step 3 to answer Security question.



| ₿BSN | | C- Login |
|----------------|-----------------------|----------|
| Device Pairing | | |
| | | |
| | | |
| | Username and Password | |
| | | |
| | | |
| | | |
| Username* | | |
| Password* | | |
| | | |
| Cancel | Next | |
| | | _ |
| | | _ |

Figure 49: Token Activation - Username and Password

Error messages for the screen:

| No | Action Code | Error Description in English |
|----|-------------|---|
| 1. | REJECT | Return error message "You are not allowed to activate mobile token. |
| | | Please contact BSNeBiz Contact Centre at 1300 88 1900 for |
| | | assistance". |

Table 45: Fraud Alert - Return Error Message

Step 3:

- 1. Retrieve the Security question from FHP and Predator and display to user.
- 2. Customer Answer the question and click submit button.
- 3. BSNeBiz request FHP and Predator to validate the submitted answer.
 - a) IF the response return "YES", indicate the answer is correct, BSNeBiz will redirect customer to step 4.
 - b) IF the response return "NO", indicate the answer is incorrect. BSNeBiz perform checking on FHP and Predator user status:
 - i. Unlocked BSNeBiz request FHP and Predator to return next Security question.
 - ii. Locked BSNeBiz throws error message "Access has been locked. Please contact BSNeBiz Contact Centre at 1300 88 1900 for assistance" and will redirect user to logout page.



| Security Question | What's your favourite pet? | |
|-------------------|----------------------------|--------|
| | | Submit |

Figure 50: Security Question screen

Display Specification:

| No | Field | Field Type | Description |
|----|-------------------|------------|------------------------------|
| 1. | Security Question | Text | Details of security question |

Table 46: Fraud Alert – Security Question Display Specification

Input Specification:

| No | Field | Field Type | Rule | Description | Required |
|----|--------|------------|--------------|---------------------------|----------|
| 1. | Answer | Text Box | Alphanumeric | Input answer for security | Yes |
| | | | | question | |

Table 47: Fraud Alert – Security Question Input Specification

Action:

| No | Action | Туре | Description |
|----|--------|--------|---|
| 1. | Submit | Button | Contains an action to submit the security question to FHP and Predator to process response. |
| 2. | Close | Button | Contains an action to close the security question |

Table 48: Fraud Alert - Security Question Action

List of available messages for the screen:

| No | Event | Error Description in English |
|----|---|--|
| 1. | Submit empty field | Security Question answer is required |
| 2. | FHP and Predator return error incorrect | Security Question answer is incorrect |
| | answer | |
| 3. | FHP and Predator return user status | Access has been locked. Please contact BSNeBiz |
| | locked | Contact Centre at 1300 88 1900 for assistance |

Table 49: Fraud Alert - Security Question Error Message

Step 4:

1. CDB system display QR code.



| ₿BSN | | C- Login |
|---------------------------------------|---|----------|
| Device Pairing | | |
| | | |
| | Token Registration | |
| | | |
| Username | SINGLEUSER3 | |
| Activation Code | 63320768605635 | |
| Please | e scan this QR code to complete the registration. | |
| Cancel | Finish | |
| · · · · · · · · · · · · · · · · · · · | | |

Figure 51: Security Token Result screen

2.2.11 SOW01.2k: Forgot Password

| Function ID | SOW01.2k | | |
|-------------|--|---------------------|--|
| Module Name | First Time Login | Path | BSNeBiz/First Time Login |
| Description | Step-up authentication will be i module. This step-up authent analysis result. | mpleme ication v | nted to module that related with first time login will be redirected based on FHP and Predator |

2.2.11.1 Process Flow



Diagram 11: Forgot Password Process Flow

2.2.11.2 Screen Flow

Step 1:

1. BSNeBiz user accessing to Forgot Password Screen.





Figure 52: Login screen

Step 2:

- 1. BSNeBiz prompts the screen for Forgot Password Credential.
- 2. BSNeBiz User inputs Username and click Next button.

| ₿BSN | | | C- Log |
|-------------|-----------|---------------------------------------|--------|
| Reset Passv | word | | |
| | | · · · · · · · · · · · · · · · · · · · | |
| | | Username | |
| | Username* | | |
| | Cancel | Next | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Figure 53: Forgot Password credential screen



Step 3:

- 1. System validates Username and display Security Question screen. The Security Question will be randomly picked from the list registered by User during FTL.
- 2. User inputs the Security Question answer and clicks on the "Next" button.

| ₿BSN | | Cogin |
|----------------------------------|---|-------|
| Reset Password | | |
| | | |
| | Security Question | |
| | Security Question | |
| If Service Unavailable, your ans | wer is incorrect or account has been locked. If Account is locked, please contact your Corporate Admin to unlock account to get temporary password via email. | |
| Security Quest | ion Where is your birth place? | |
| Answer* | | |
| Confirm Answe | r | |
| Back | Next | |
| | | |
| | | |
| | | |

Figure 54: Forgot Password Security Question screen

Step 4:

- 1. BSNeBiz displays the screen for Change Password.
- 2. User inputs New Password and Confirm New Password and clicks on the "Confirm" button.
- 3. BSNeBiz will call FHP and Predator to perform Risk Analysis process with require information.
- 4. BSNeBiz perform checking on action code from FHP and Predator analysis response:
 - a. IF risk analysis response action code **REJECT**, BSNeBiz will throws error message "You are not allows to perform Reset Password. Please contact BSNeBiz Contact Centre at 1300 88 1900 for assistance" and will redirect user to logout page.
 - b. IF risk analysis response action code is **OK** and user status is **APPROVE/UNLOCK**, a user is allows to skip the step-up authentication and the BSNeBiz will redirect user to result screen at step 6.
 - c. IF risk analysis response action code **STEPUP**, the BSNeBiz will pop up Security question screen for user to answer security question at next step 5.



| ₿SN | | 🔀 Login |
|-----------------------|----------|---------|
| Reset Password | | |
| | | |
| | | |
| | Password | |
| New Password* | | |
| Confirm New Password* | | |
| | | |
| Back | Next | |
| | | |
| | | |
| | | |
| | | |

Figure 55: Change Password screen

Error messages for the screen:

| No | Action Code | Error Description in English | |
|----|-------------|---|--|
| 1. | REJECT | Return error message "You are not allows to perform Reset | |
| | | Password. Please contact BSNeBiz Contact Centre at 1300 88 1900 | |
| | | for assistance". | |

Table 50: Fraud Alert - Return Error Message

Step 3:

- 1. Retrieve the Security question from FHP and Predator and display to user.
- 2. Customer Answer the question and click submit button.
- 3. BSNeBiz request FHP and Predator to validate the submitted answer.
 - a) IF the response return "YES", indicate the answer is correct, BSNeBiz will redirect customer to step 4.
 - b) IF the response return "NO", indicate the answer is incorrect. BSNeBiz perform checking on FHP and Predator user status:
 - i. Unlocked BSNeBiz request FHP and Predator to return next Security question.
 - ii. Locked BSNeBiz throws error message "Access has been locked. Please contact BSNeBiz Contact Centre at 1300 88 1900 for assistance" and will redirect user to logout page.



| Security Question | What's your favourite pet? |
|-------------------|----------------------------|
| | Submit |

Figure 56: Security Question screen

Display Specification:

| No | Field | Field Type | Description |
|----|-------------------|------------|------------------------------|
| 1. | Security Question | Text | Details of security question |

Table 51: Fraud Alert – Security Question Display Specification

Input Specification:

| No | Field | Field Type | Rule Description | | Required |
|----|--------|------------|------------------|---------------------------|----------|
| 1. | Answer | Text Box | Alphanumeric | Input answer for security | Yes |
| | | | | question | |

Table 52: Fraud Alert – Security Question Input Specification

Action:

| No | Action | Туре | Description |
|----|--------|--------|---|
| 1. | Submit | Button | Contains an action to submit the security question to FHP and Predator to process response. |
| 2. | Close | Button | Contains an action to close the security question |

Table 53: Fraud Alert - Security Question Action

List of available messages for the screen:

| No | Event | Error Description in English | |
|----|---|--|--|
| 1. | Submit empty field | Security Question answer is required | |
| 2. | FHP and Predator return error incorrect | Security Question answer is incorrect | |
| | answer | | |
| 3. | FHP and Predator return user status | Access has been locked. Please contact BSNeBiz | |
| | locked | Contact Centre at 1300 88 1900 for assistance | |

Table 54: Fraud Alert - Security Question Error Message

Step 4:

1. BSNeBiz System saves the New Password to IB Database and display the result screen. User can go back to Login screen by click the "Proceed to Login" button.



| ₿BSN | Cogin |
|---|-------|
| Reset Password | |
| Result | |
| Success Your password has been reset successfully. Proceed to Login | |
| | |

Figure 57: Forgot Password result screen

2.2.12 SOW01.2I: Change Password

| Function ID | SOW01.2I | | | |
|-------------|--|--|--|--|
| Module Name | Change Password Path BSNeBiz/Change Password | | | |
| Description | Step-up authentication will be implemented to module that related with change password module. This step-up authentication will be redirected based on FHP and Predator analysis result. | | | |

2.2.12.1 Process Flow



Diagram 12: Change Password Process Flow

2.2.12.2 Screen Flow

Step 1:

1. User access to BSNeBiz Landing page and clicks "Change Password".



| ₿BSN | | 😚 Log Out |
|--|--|-----------|
| Your last login was on Monday, 21 August 2023 11:44:50 | | > |
| 1 Home | RM3,098,522.09 | |
| Account Summary > | | |
| ←S Transfer & > SI → Payment | Recent Activities | |
| 🖏 JomPAY > | Show 10 v entries Search: | |
| DuitNow > | Date Time Transaction Type To Account Amount Status | • |
| Standing > Instructions | 17/08/2023 17:23:42 Own Account Transfer 1413629100000437 RM10.00 Pending Approval 009929100000375 | _ |
| Auto Debit | 16/08/2023 22:49:09 New Interbank Transfer 0099929100000375 RM10.00 Pending Approval 5000040430 | |
| Statutory Body - > | 16/08/2023 08:18:34 New Interbank Transfer 0099929100000375 RM6.00 Pending Approval 5000040430 | _ |
| EPF Statutory Body - > | 14/08/2023 19:07:16 New Interbank Transfer 1413629100000437 RM10.00 Pending Approval 5000040430 | |



Step 2:

- 1. BSNeBiz prompts the screen for Change Password.
- 2. User inputs Old password, New password, Confirm new password and click Confirm button.
- 3. BSNeBiz will call FHP and Predator to perform Risk Analysis process with require information.
- 4. BSNeBiz perform checking on action code from FHP and Predator analysis response:
 - a. IF risk analysis response action code **REJECT**, BSNeBiz will throws error message "You are not allows to perform Change Password. Please contact BSNeBiz Contact Centre at 1300 88 1900 for assistance" and will redirect user to logout page.
 - b. IF risk analysis response action code is **OK** and user status is **APPROVE/UNLOCK**, a user is allows to skip the step-up authentication and the BSNeBiz will redirect user to result screen at step 4.
 - c. IF risk analysis response action code **STEPUP**, the BSNeBiz will pop up Security question screen for user to answer security question at next step 3.



| ₿BSN | | 💏 Log Out |
|--|-----------------------|-----------|
| Your last login was on Monday, 21 August 2023 12:57:50 | Change password | |
| ≗⊠°≙♥► | | |
| 1 Home | Confirmation | |
| Account Summary > | Usemame | |
| G → Transfer & > Fayment | Old password* | |
| 🖏 JomPAY > | New password* | |
| DuitNow | Confirm new password* | |
| Instructions | Clear | |
| Bulk Payment > | | |
| Statutory Body - > EPF | | |
| Statutory Body - > | | |

Figure 59: Change Password confirmation screen

Error messages for the screen:

| No | Action Code | Error Description in English | |
|----|------------------|---|--|
| 1. | REJECT | Return error message "You are not allows to perform Change | |
| | | Password. Please contact BSNeBiz Contact Centre at 1300 88 1900 | |
| | for assistance". | | |

Table 55: Fraud Alert - Return Error Message

Step 3:

- 1. Retrieve the Security question from FHP and Predator and display to user.
- 2. Customer Answer the question and click submit button.
- 3. BSNeBiz request FHP and Predator to validate the submitted answer.
 - a) IF the response return "YES", indicate the answer is correct, BSNeBiz will redirect customer to step 4.
 - b) IF the response return "NO", indicate the answer is incorrect. BSNeBiz perform checking on FHP and Predator user status:
 - i. Unlocked BSNeBiz request FHP and Predator to return next Security question.
 - ii. Locked BSNeBiz throws error message "Access has been locked. Please contact BSNeBiz Contact Centre at 1300 88 1900 for assistance" and will redirect user to logout page.



| Security Question | What's your favourite pet? | |
|-------------------|----------------------------|--------|
| | | Submit |



Display Specification:

| No | Field | Field Type | Description |
|----|-------------------|------------|------------------------------|
| 1. | Security Question | Text | Details of security question |

Table 56: Fraud Alert – Security Question Display Specification

Input Specification:

| No | Field | Field Type | Rule | Description | Required |
|----|--------|------------|--------------|---------------------------|----------|
| 1. | Answer | Text Box | Alphanumeric | Input answer for security | Yes |
| | | | | question | |

Table 57: Fraud Alert – Security Question Input Specification

Action:

| No | Action | Туре | Description |
|----|--------|--------|---|
| 1. | Submit | Button | Contains an action to submit the security question to FHP and Predator to process response. |
| 2. | Close | Button | Contains an action to close the security question |

Table 58: Fraud Alert - Security Question Action

List of available messages for the screen:

| No | Event | Error Description in English |
|----|---|--|
| 1. | Submit empty field | Security Question answer is required |
| 2. | FHP and Predator return error incorrect | Security Question answer is incorrect |
| | answer | |
| 3. | FHP and Predator return user status | Access has been locked. Please contact BSNeBiz |
| | locked | Contact Centre at 1300 88 1900 for assistance |

Table 59: Fraud Alert - Security Question Error Message

Step 4:

LAST UPDATED: 21 September 2023 VER.00



1. BSNeBiz System saves the New Password to IB Database and display the result screen.

| ₿₿ | SN | | | 💏 🛛 Log Out |
|------------------------|---|----|---|-------------|
| Yo Mon | ur last login was on nday, 21 August 202 12:57:50 | 13 | Change password | |
| 2 2 | s• 🔒 🗘 | ► | | |
| 1 | Home | | Result | |
| ah 4 | Account Summar | y> | | |
| (-0) T 10)→ T 17 | Fransfer & Payment | | Your password has been changed/updated. | |
| 199 J | JomPAY | | Username UMALINITIATOR | |
| <u>.</u> | DuitNow | | Change password | |
| ۳. ۱ | Standing instructions | | | |
| "Q / | Auto Debit | | | |
| õ • | Bulk Payment | | | |
| | Statutory Body - EPF | | | |
| e : | Statutory Body - LHDN | > | | |

Figure 61: Change Password result screen



2.2.13 SOW01.2m: Change Security

| Function ID | SOW01.2m | | |
|-------------|--|------|-------------------------|
| Module Name | Change Security | Path | BSNeBiz/Change Security |
| Description | Change Security module will allow a user to change security questions and update the FHP and Predator Security Questions for step-up authentication. | | |

2.2.13.1 Process Flow



Diagram 13: Change Security Process Flow

2.2.13.2 Screen Flow

Step 1:

- 1. BSNeBiz user access to Change Security screen.
- 2. User clicks on "Edit" button.



| ₿BSN | | | 🞢 Log Out |
|--|---------------------|-----------------------------------|-----------|
| Your last login was on Monday, 21 August 2023 14:37:53 | | | |
| ≗⊠°≙♥► | | Details | |
| Home | Security Phrase | Uuuu@4444 | |
| | Security Question 1 | What's your favourite pet? | |
| (-6) Transfor 8 | Answer 1 | Cat | |
| B → Transfer & Payment | Security Question 2 | Where is your birth place? | |
| 🐨 JomPAY > | Answer 1 | Kuala Lumpur | |
| DuitNow > | Security Question 3 | What is your primary school name? | |
| Standing > Instructions | Answer 1 | SK | |
| 👏 Auto Debit 🛛 🗧 | | Edit | |
| 💣 Bulk Payment > | | | |
| Statutory Body - > EPF | | | |
| Statutory Body - > | | | |

Figure 62: Change Security – Details screen

Step 2:

- 1. User input the required information details.
- 2. Click "Next" button.

| ₿BSN | | 💏 🛛 Log Out |
|--|---|-------------|
| Your last login was on Monday, 21 August 2023 14:37:53 | | |
| ≗≊°≙♥► | | |
| 1 Home | | |
| Account Summary > | Security Phrase Uuuu@4444 | |
| G→ Transfer & → Payment | Security Question 1 What's your favourite pet? | |
| 🖑 JomPAY > | Answer 1 Cat | |
| DuitNow > | Security Question 2 Where is your birth place? | |
| Standing > Instructions | Answer 2 Kuala Lumpur | |
| Auto Debit 🛛 👌 | Security Question 3 What is your primary school name? | |
| 💣 Bulk Payment > | Answer 3 SK | |
| Statutory Body - > | Next | |
| Statutory Body - > | | |

Figure 63: Change Security – Details screen

Step 3:

- 1. View change security details on the confirmation page.
- 2. Click on "Confirm" button.
- 3. BSNeBiz will call FHP and Predator to perform Risk Analysis process with require information.



- 4. BSNeBiz perform checking on action code from FHP and Predator analysis response:
 - d. IF risk analysis response action code **REJECT**, BSNeBiz will throws error message "You are not allows to perform security changes. Please contact BSNeBiz Contact Centre at 1300 88 1900 for assistance" and will redirect user to logout page.
 - e. IF risk analysis response action code is **OK** and user status is **APPROVE/UNLOCK**, a user is allows to skip the step-up authentication and the BSNeBiz will redirect user to result screen at step 5.
 - f. IF risk analysis response action code **STEPUP**, the BSNeBiz will pop up Security question screen for user to answer security question at next step 4.

| ₿BSN | | | | 👫 🛛 Log Out |
|--|---|---------------------|-----------------------------------|-------------|
| Your last login was on Monday, 21 August 2023 14:37:53 | | | | |
| ≗≊°≙♥∣ | | | Confirmation | |
| | | | Commation | |
| Home | | Security Phrase | Uuuu@4444 | |
| | | Security Question 1 | What's your favourite pet? | |
| G → Transfer & Payment | | Answer 1 | Cat | |
| JomPAY : | > | Security Question 2 | Where is your birth place? | |
| DuitNow | > | Answer 2 | Kuala Lumpur | |
| Standing Instructions | > | Security Question 3 | What is your primary school name? | |
| 🔎 Auto Debit | > | Answer 3 | SK | |
| 💣 Bulk Payment 🗧 | > | Back | Confirm | |
| Statutory Body - | > | | | |
| Statutory Body - | > | | | |

Figure 64: Change Security – Confirmation screen

Error messages for the screen:

| No | Action Code | Error Description in English | | |
|----|-------------|--|--|--|
| 1. | REJECT | Return error message "You are not allows to perform security | | |
| | | changes. Please contact BSNeBiz Contact Centre at 1300 88 1900 for | | |
| | | assistance". | | |
| | | | | |

Table 60: Fraud Alert - Return Error Message

Step 4:

- 1. Retrieve the Security question from FHP and Predator and display to user.
- 2. Customer Answer the question and click submit button.
- 3. BSNeBiz request FHP and Predator to validate the submitted answer.
 - a) IF the response return "YES", indicate the answer is correct, BSNeBiz will redirect customer to step 4.



- b) IF the response return "NO", indicate the answer is incorrect. BSNeBiz perform checking on FHP and Predator user status:
 - i. Unlocked BSNeBiz request FHP and Predator to return next Security question.
 - ii. Locked BSNeBiz throws error message "Access has been locked. Please contact BSNeBiz Contact Centre at 1300 88 1900 for assistance" and will redirect user to logout page.

| Security Question | What's your favourite pet? |
|-------------------|----------------------------|
| | Submit |



Display Specification:

| No | Field | Field Type | Description |
|----|-------------------|------------|------------------------------|
| 1. | Security Question | Text | Details of security question |

Table 61: Fraud Alert – Security Question Display Specification

Input Specification:

| No | Field | Field Type | Rule | Description | Required |
|----|--------|------------|--------------|---------------------------|----------|
| 1. | Answer | Text Box | Alphanumeric | Input answer for security | Yes |
| | | | | question | |

Table 62: Fraud Alert – Security Question Input Specification

Action:

| No | Action | Туре | Description |
|----|--------|--------|---|
| 1. | Submit | Button | Contains an action to submit the security question to FHP and Predator to process response. |
| 2. | Close | Button | Contains an action to close the security question |

Table 63: Fraud Alert - Security Question Action

List of available messages for the screen:

| No | Event | Error Description in English |
|----|---|---------------------------------------|
| 1. | Submit empty field | Security Question answer is required |
| 2. | FHP and Predator return error incorrect | Security Question answer is incorrect |
| | answer | |



| No | Event | Error Description in English |
|----|-------------------------------------|--|
| 3. | FHP and Predator return user status | Access has been locked. Please contact BSNeBiz |
| | locked | Contact Centre at 1300 88 1900 for assistance |

Table 64: Fraud Alert - Security Question Error Message

Step 5:

1. BSNeBiz System display result screen.

| ₿BSN | 21.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1. | Log Out |
|--|---|---------|
| Your last login was on Monday, 21 August 2023 14:37:53 | | |
| | Result | |
| 1 Home | | |
| Account Summary > | Your security questions and answers have been successfully changed/updated. | |
| <-S Transfer & > | Security Phrase Uuuu@4444 | |
| 😇 JomPAY > | Security Question 1 What's your favourite pet? | |
| DuitNow > | Answer 1 Cat | |
| Standing > | Security Question 2 Where is your birth place? | |
| 👏 Auto Debit 🛛 🔾 | Answer 2 Kuala Lumpur | |
| 💣 Bulk Payment > | Security Question 3 What is your primary school name? | |
| Statutory Body - > EPF | Answer 3 SK | |
| Statutory Body - > | Back | |
| O Peporte & Data | | |

Figure 66: Change Security – Result screen



Section C: BSNeBiz Mobile Application

3 SOW02: Enhancement at BSNeBiz Mobile App

3.1 SOW02.1: To apply FHP and Predator plugin / code to every module include monetary and non-monetary based on FHP Rule Flow

| Function ID | SOW01.1 | | |
|-------------|--|------|----------------|
| Module Name | Monetary and Non-Monetary | Path | BSNeBiz Mobile |
| Description | FHP and Predator will apply to every module for monetary and non-monetary transaction based on transaction code in BSNeBiz in table below. | | |

| No | Value | Description | Туре |
|----|----------------|-----------------------------|----------|
| 1 | BFUNOWN | FUND TRANSFER OWN | Monetary |
| 2 | BFUNLOAN | FUND TRANSFER LOAN | Monetary |
| 3 | BFUNFRA | FUND TRANSFER INTRABANK FAV | Monetary |
| 4 | BFUNORA | FUND TRANSFER INTRABANK NEW | Monetary |
| 5 | BFUNFER | FUND TRANSFER INTERBANK FAV | Monetary |
| 6 | BFUNOER | FUND TRANSFER INTERBANK NEW | Monetary |
| 7 | BFUNFRR | FUND TRANSFER FAV RENTAS | Monetary |
| 8 | BFUNORR | FUND TRANSFER NEW RENTAS | Monetary |
| 9 | BFUNCARD | FUND TRANSFER CORP CARD | Monetary |
| 10 | BFUNOEDUITN OW | FUND TRANSFER DUITNOW NEW | Monetary |
| 11 | BFUNFEDUITN OW | FUND TRANSFER DUITNOW FAV | Monetary |
| 12 | BFUNTD | FUND TRANSFER TERM DEPOSIT | Monetary |

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| No | Value | Description | Туре |
|----|-------------------|----------------------------|--------------|
| 13 | BBILLOPEN | BILL PAYMENT NEW PAYMENT | Monetary |
| 14 | BBILLFAV | BILL PAYMENT FAV PAYMENT | Monetary |
| 15 | BNBPSOPEN | JOMPAY NEW PAYMENT | Monetary |
| 16 | BNBPSYFAV | JOMPAY FAV PAYMENT | Monetary |
| 17 | BACCLOGIN | ACCESS_LOGIN | Non-Monetary |
| 18 | BACCLOGOUT | ACCESS_LOGOUT | Non-Monetary |
| 19 | BACCFPA | ACCESS_RESET_PASSWORD | Non-Monetary |
| 20 | BASPSS | ACCESS_RESET_SECURE_PASS | Non-Monetary |
| 21 | BACCREG | ACCESS_FT_LOGIN | Non-Monetary |
| 22 | BACCTAC | ACCESS_FT_TAC | Non-Monetary |
| 23 | BDEVICEPAIRI NG | ACCESS_DEVICE_PAIRING | Non-Monetary |
| 24 | BMIGRATEDLO GIN | ACCESS_MIGRATED_LOGIN | Non-Monetary |
| 25 | BENQSUM | ACCOUNT_ENQUIRY_SUMMARY | Non-Monetary |
| 26 | BNOADET | NORMAL_ACC_DETAILS | Non-Monetary |
| 27 | BLNADET | LOAN_ACC_DETAILS | Non-Monetary |
| 28 | BESTMNT | E_STATEMENT | Non-Monetary |
| 29 | BTRANSHIST | TRANSACTION_HISTORY | Non-Monetary |
| 30 | BONLINEHIST | ONLINE_TRANSACTION_HISTORY | Non-Monetary |
| 31 | BACCVALIDATI ON | ACCOUNT_VALIDATION | Non-Monetary |
| 32 | BCASHLINEIN OTICE | CASHLINE_I_NOTICE | Non-Monetary |



| No | Value | Description | Туре |
|----|------------------|-----------------------------|--------------|
| 33 | BFUNMRA | FUND_TRANSFER_INTRA_MAINT | Non-Monetary |
| 34 | BFUNMRAADD | FUND_TRANSFER_INTRA_ADD | Non-Monetary |
| 35 | BFUNMRAEDIT | FUND_TRANSFER_INTRA_EDIT | Non-Monetary |
| 36 | BFUNMRADEL | FUND_TRANSFER_INTRA_DELETE | Non-Monetary |
| 37 | BFUNMER | FUND_TRANSFER_INTER_MAINT | Non-Monetary |
| 38 | BFUNMERADD | FUND_TRANSFER_INTER_ADD | Non-Monetary |
| 39 | BFUNMEREDIT | FUND_TRANSFER_INTER_EDIT | Non-Monetary |
| 40 | BFUNMERDEL | FUND_TRANSFER_INTER_DELETE | Non-Monetary |
| 41 | BBILLFAVMAINT | BILL PAYMENT FAV PAYEE | Non-Monetary |
| 42 | BBPFAVPAYAD | BILL PAYMENT FAV PAYEE ADD | Non-Monetary |
| 43 | BBPFAVPAYDE | BILL PAYMENT FAV PAYEE DEL | Non-Monetary |
| 44 | BBPFAVPAYED | BILL PAYMENT FAV PAYEE EDIT | Non-Monetary |
| 45 | BJOMPAYFAV MAINT | JOMPAY FAV BILLER | Non-Monetary |
| 46 | BBPFAVBILLAD | JOMPAY FAV BILLER ADD | Non-Monetary |
| 47 | BBPFAVBILLDE | JOMPAY FAV BILLER DEL | Non-Monetary |
| 48 | BBPFAVBILLED | JOMPAY FAV BILLER EDIT | Non-Monetary |



3.2SOW02.2: To implement the security question to every module if triggered FHP and Predator rule

3.2.1 SOW02.2a: Transactions

| Module Name Transfer and Payment Path BSNeBiz Mobile/Transfer and Payment Description Step-up authentication will be implemented to module that related with fund transfer or payment module. This step-up authentication will be redirected based on FHP and Predator analysis result. Below are type of fund transfer module for BSNeBiz Mobile implemented with FHP and Predator enhancement: a) Transfer & Payment i. Own Account Transfer ii. DuitNow | Function ID | SOW02.2a | | |
|--|-------------|---|--|--|
| Description Step-up authentication will be implemented to module that related with fund transfe or payment module. This step-up authentication will be redirected based on FHP and Predator analysis result. Below are type of fund transfer module for BSNeBiz Mobile implemented with FHP and Predator enhancement: a) Transfer & Payment i. Own Account Transfer iii. DuitNow | Module Name | Transfer and Payment | Path | BSNeBiz Mobile/Transfer and Payment |
| iv. Bill Payment v. JomPAY vi. Favourite Account | Description | Step-up authentication will to or payment module. This step- Predator analysis result. Below are type of fund trans and Predator enhancement: a) Transfer & Pay i. Own Acco ii. DuitNow iii. BSN/IBG/ iv. Bill Payme v. JomPAY vi. Favourite | e impleme p-up auth fer module ment unt Transe RENTAS ent Account | ented to module that related with fund transfer ientication will be redirected based on FHP and e for BSNeBiz Mobile implemented with FHP fer |

3.2.1.1 Process Flow



Diagram 14: Transaction Process Flow



3.2.1.2 Screen Flow

The Own Account transfer type will be used as a sample for fund transfer screen flow with FHP and Predator.

Step 1:

- 1. BSNeBiz User login to BSNeBiz Mobile.
- 2. Access to Transfer and Payment module.
- 3. User insert all required fields and tap on the "Next" button to go to the confirmation page.

| Transfer an transfer and transfer and | d Poyment |
|---|-----------------------|
| TRANS | FER TO NT TRANSFER |
| Amount * | |
| RM 5 | |
| Transfer To * | Transfer From * |
| Recipient Reference * | |
| Utilities Bill | |
| Other Transfer Details | |
| January | |
| Transfer Mode * | |
| Transfer Now | O Later |
| Clear | Next |

Figure 67: BSNeBiz Mobile Apps Transfer and Payment Fill Details > Own Account Transfer Page

Step 2:

- 1. After User filled the form and tap on the "Next" button, Transaction Confirmation form will shown
- 2. Review the details on confirmation page and tap on "Confirm" button.
- 3. BSNeBiz will call FHP and Predator to perform Risk Analysis process with require information.
- 4. BSNeBiz perform checking on action code from FHP and Predator analysis response:



- a. IF risk analysis response action code **REJECT**, BSNeBiz Mobile App will throws error message "You are not allows to perform this transaction. Please contact BSNeBiz Contact Centre at 1300 88 1900 for assistance" and will redirect user to logout page.
- b. IF risk analysis response action code is **OK** and user status is **APPROVE/UNLOCK**, a user is allows to skip the step-up authentication and the BSNeBiz Mobile App will redirect user to result screen at step 4.
- c. IF risk analysis response action code **STEPUP**, the BSNeBiz Mobile App redirect user to security question screen for user to answer security question at next step 3.

| ALICOLA COMP | urros esta |
|-----------------------|--------------------------------------|
| TRANS | ACTION |
| CONFIR | MATION |
| OWN ACCOUR | NT TRANSFER |
| Organization Name | |
| VOC DT ACADEMY | SDN BHD |
| Amount * | |
| RM 5 | |
| Charges | |
| RM 0 | |
| Transfer From * | |
| 009994110000028 | 6 GIRO_I PREMIUM |
| PERWIRA | |
| Transfer To * | |
| 009992910000037 5 | 0099929100 000375 GIR0 PERWIRA |
| Recipient Reference | |
| Utilities Bill | |
| Other Transfer Detail | 5 |
| January | |
| Transfer Mode * | |
| Now | |

Figure 68: BSNeBiz Mobile Apps Transfer and Payment Transaction Confirmation



Error messages for the screen:

| No | Action Code | Error Description in English | |
|----|-------------|--|--|
| 1. | REJECT | Return error message "You are not allows to perform this | |
| | | transaction. Please contact BSNeBiz Contact Centre at 1300 88 1900 | |
| | | for assistance". | |

Table 65: Fraud Alert - Return Error Message

Step 3:

- 1. Retrieve the security question and display to user.
- 2. User answer the question and tap on "Submit" button.
- 3. BSNeBiz request FHP and Predator to validate the submitted answer.
 - a. IF the response return "YES", indicate the answer is correct, BSNeBiz Mobile App will redirect user to step 4.
 - b. IF the response return "NO", indicate the answer is incorrect. BSNeBiz Mobile App perform checking on error counting.
 - i. UNLOCKED BSNeBiz request FHP and Predator to return next security question.
 - ii. LOCKED BSNeBiz throws error message "Access has been locked. Please contact BSNeBiz Contact Centre at 1300 88 1900 for assistance" and will redirect user to logout page.



Figure 69: Fraud Alert – Security Question screen



Display Specification:

| No | Field | Field Type | Description |
|----|-------------------|------------|------------------------------|
| 1. | Security Question | Text | Details of security question |

Table 66: Fraud Alert - Security Question Display Specification

Input Specification:

| No | Field | Field Type | Rule | Description | Required |
|----|--------|------------|--------------|---------------------------|----------|
| 1. | Answer | Text Box | Alphanumeric | Input answer for security | Yes |
| | | | | question | |

Table 67: Fraud Alert – Security Question Input Specification

Action:

| No | Action | Туре | Description |
|----|--------|--------|---|
| 1. | Submit | Button | Contains an action to submit the data and system will |
| | | | process response. |

Table 68: Fraud Alert - Security Question Action

List of available messages for the screen:

| No | Event | Error Description in English |
|----|--|--|
| 1. | Submit empty field | Security Question answer is required |
| 2. | FHP and Predator return error incorrect answer | Security Question answer is incorrect |
| 3. | FHP and Predator return user status | Access has been locked. Please contact BSNeBiz |
| | locked | Contact Centre at 1300 88 1900 for assistance |

Table 69: Fraud Alert - Security Question Error Message

Step 4:

1. BSNeBiz Mobile App display result page.



| STATUS PENDING VERIFY OWN ACCOUNT TRANSFER | | | | | |
|--|----------------------------------|--|--|--|--|
| Organization Name VOC DT ACADEMY | SDN BHD | | | | |
| Amount * RM 2 | | | | | |
| Charges RM 0 | | | | | |
| Transfer From * 009994110000028 | 16 | | | | |
| Transfer To * 009992910000037 5 | 0099929100000375 GIRO PERWIRA | | | | |
| Recipient Reference Utiliyies Bill | • | | | | |
| Other Transfer Detail lest | | | | | |
| Transfer Mode * | | | | | |
| Transaction Date | | | | | |
| Transaction Time | | | | | |

Figure 70: BSNeBiz Mobile Apps Transfer and Payment Result Page

Status might be different depending on the organization setup. For workflow company, the status will be **Pending Verify or **Pending Approval**. For non-workflow company, the status will be **Successful**.



3.2.2 SOW02.2b: Quick Balance

| Function ID | SOW02.2b | SOW02.2b | | | |
|-------------|--|--|--|---|--|
| Module Name | Quick Balanc | e | Path | BSNeBiz Mobile/Quick Balance | |
| Description | Step-up auth module. This analysis resu Below are t enhancemer a) b) c) d) e) f) | entication will be s step-up authent lt. cype of quick ba it: GIRO Accounts GIRO-i Accounts GIRO-i Premium Fixed Investmen Loan Accounts Corporate Accou | impleme ication v lance m Account t Accour | ented to module that related with quick balance will be redirected based on FHP and Predator hodule implemented with FHP and Predator | |
| | | | | | |

3.2.2.1 Process Flow



Diagram 15: Quick Balance Process Flow

3.2.2.2 Screen Flow

The GIRO-i Account will be used as a sample for account summary screen flow with FHP and Predator.



Step 1:

- 1. User access to BSNeBiz Mobile Landing Page and clicks "Quick Balance".
- 2. BSNeBiz System retrieves Account from Host System by CIS No. and displays Account for Holding Company & subsidiary company if any.
- 3. User tap on the selected account.
- 4. BSNeBiz will call FHP and Predator to perform Risk Analysis process with require information.
- 5. BSNeBiz perform checking on action code from FHP and Predator analysis response:
 - a. IF risk analysis response action code **REJECT**, BSNeBiz Mobile App will throws error message "You are not allows to view details of this account. Please contact BSNeBiz Contact Centre at 1300 88 1900 for assistance" and will redirect user to logout page.
 - b. IF risk analysis response action code is **OK** and user status is **APPROVE/UNLOCK**, a user is allows to skip the step-up authentication and the BSNeBiz Mobile App will redirect user to result screen at step 3.
 - c. IF risk analysis response action code **STEPUP**, the BSNeBiz Mobile App redirect user to security question screen for user to answer security question at next step 2.



Figure 71: BSNeBiz Mobile Apps Quick Balance screen



Step 2:

- 1. Retrieve the security question and display to user.
- 2. User answer the question and tap on submit button.
- 3. BSNeBiz request FHP and Predator to validate the submitted answer.
 - a. IF the response return "YES", indicate the answer is correct, BSNeBiz Mobile App will redirect user to step 3.
 - b. IF the response return "NO", indicate the answer is incorrect. BSNeBiz Mobile App perform checking on error counting.
 - i. UNLOCKED BSNeBiz request FHP and Predator to return next security question.
 - ii. LOCKED BSNeBiz throws error message "Access has been locked. Please contact BSNeBiz Contact Centre at 1300 88 1900 for assistance" and will redirect user to logout page.



Figure 72: Fraud Alert – Security Question screen

Display Specification:

| No | Field | Field Type | Description |
|----|-------------------|------------|------------------------------|
| 1. | Security Question | Text | Details of security question |

Table 70: Fraud Alert - Security Question Display Specification



Input Specification:

| No | Field | Field Type | Rule | Description | Required |
|----|--------|------------|--------------|---------------------------|----------|
| 1. | Answer | Text Box | Alphanumeric | Input answer for security | Yes |
| | | | | question | |

Table 71: Fraud Alert – Security Question Input Specification

Action:

| No | Action | Туре | Description |
|----|--------|--------|---|
| 1. | Submit | Button | Contains an action to submit the data and system will |
| | | | process response. |

Table 72: Fraud Alert - Security Question Action

List of available messages for the screen:

| No | Event | Error Description in English |
|----|---|--|
| 1. | Submit empty field | Security Question answer is required |
| 2. | FHP and Predator return error incorrect | Security Question answer is incorrect |
| | answer | |
| 3. | FHP and Predator return user status | Access has been locked. Please contact BSNeBiz |
| | locked | Contact Centre at 1300 88 1900 for assistance |

Table 73: Fraud Alert - Security Question Error Message

Step 3:

1. BSNeBiz Mobile App retrieve the information from Host and display the details screen.





Figure 73: BSNeBiz Mobile Apps details screen



3.2.3 SOW02.2c: Login

| Function ID | SOW02.2c | | | |
|-------------|--|---------------------------------|---|--|
| Module Name | Login | Path | BSNeBiz/Login | |
| Description | Step-up authentication will be in This step-up authentication will result. Below are type of role for enhancement: a) Initiator b) Verifier c) Approver d) Single User | impleme ill be re login m | ented to module that related with login module. edirected based on FHP and Predator analysis nodule implemented with FHP and Predator | |

3.2.3.1 Process Flow



Diagram 16: Login Process Flow

3.2.3.2 Screen Flow

Single User role will be used as a sample for login screen flow with FHP and Predator.



Step 1:

- 1. The existing BSNeBiz Mobile user login as BAU process.
- 2. Input username and password and tap "Login" button.
- 3. BSNeBiz will validate the submitted password.
 - a) IF password is invalid, inform fail to login to FHP and Predator and proceed to retry login process.
 - b) IF password is correct, BSNeBiz will proceed to the Risk Analysis process and perform checking on action code and user status from the analysis response:
 - IF risk analysis response action code **REJECT**, BSNeBiz will throws error message "Unauthorized Login. Please contact BSNeBiz Contact Centre at 1300 88 1900 for assistance".
 - ii. IF risk analysis response action code **OK** and FHP and Predator user status is **APPROVE/UNLOCK**, proceed to step 3.
 - iii. IF risk analysis response **STEPUP**, BSNeBiz will route the user to step 2 to answer Security question.



Figure 74: Login screen
Error messages for the screen:

| No | Action Code | Error Description in English | |
|----|-------------|--|--|
| 1. | REJECT | Return error message "Unauthorized Login. Please contact BSNeBiz | |
| | | Contact Centre at 1300 88 1900 for assistance" | |

Table 74: Fraud Alert - Security Question Error Message

Step 2:

- 1. Retrieve the security question and display to user.
- 2. User answer the question and tap on submit button.
- 3. BSNeBiz request FHP and Predator to validate the submitted answer.
 - a. IF the response return "YES", indicate the answer is correct, BSNeBiz Mobile App will redirect user to step 3.
 - b. IF the response return "NO", indicate the answer is incorrect. BSNeBiz Mobile App perform checking on error counting.
 - i. UNLOCKED BSNeBiz request FHP and Predator to return next security question.
 - ii. LOCKED BSNeBiz throws error message "Access has been locked. Please contact BSNeBiz Contact Centre at 1300 88 1900 for assistance" and will redirect user to logout page.



Figure 75: Fraud Alert – Security Question screen



Display Specification:

| No | Field | Field Type | Description |
|----|-------------------|------------|------------------------------|
| 1. | Security Question | Text | Details of security question |

Table 75: Fraud Alert - Security Question Display Specification

Input Specification:

| No | Field | Field Type | Rule | Description | Required |
|----|--------|------------|--------------|---------------------------|----------|
| 1. | Answer | Text Box | Alphanumeric | Input answer for security | Yes |
| | | | | question | |

Table 76: Fraud Alert – Security Question Input Specification

Action:

| No | Action | Туре | Description |
|----|--------|--------|---|
| 1. | Submit | Button | Contains an action to submit the data and system will |
| | | | process response. |

Table 77: Fraud Alert - Security Question Action

List of available messages for the screen:

| No | Event | Error Description in English |
|----|--|--|
| 1. | Submit empty field | Security Question answer is required |
| 2. | FHP and Predator return error incorrect answer | Security Question answer is incorrect |
| 3. | FHP and Predator return user status | Access has been locked. Please contact BSNeBiz |
| | locked | Contact Centre at 1300 88 1900 for assistance |

Table 78: Fraud Alert - Security Question Error Message

Step 3:

1. BSNeBiz Mobile display success login screen.





Figure 76: Success Login screen



3.2.4 SOW02.2d: DuitNow QR

| Function ID | SOW02.2d | | | |
|-------------|--|--------------------------------|---|--|
| Module Name | DuitNow QR | Path | BSNeBiz Mobile/DuitNow QR | |
| Description | Step-up authentication will be module. This step-up authent analysis result. Below are type of DuitNow QR and Predator enhancement: a) Scan | implemo ication v module | ented to module that related with DuitNow QR will be redirected based on FHP and Predator for BSNeBiz Mobile implemented with FHP | |

3.2.4.1 Process Flow



Diagram 17: DuitNow Process Flow

3.2.4.2 Screen Flow

Step 1:

- 1. BSNeBiz User login to BSNeBiz Mobile.
- 2. Access to DuitNow QR module.
- 3. BSNeBiz Mobile display passcode page.



| E | nter Passo | ode | |
|-------------|-------------|-------------|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| 1 | 2 | 3 | |
| 1 | 2 5 | 3 6 | |
| 1 4 7 | 2 5 8 | 3 6 9 | • |

Figure 77: DuitNow QR > Passcode Page

Step 2:

- 1. BSNeBiz User input passcode.
- 2. BSNeBiz Mobile display QR scan page.



Figure 78: DuitNow QR > Scan



Step 3:

- 1. BSNeBiz User scan DuitNow QR code.
- 2. BSNeBiz Mobile display QR details page.
- 3. BSNeBiz User filled the details and tap on the "Continue" button.

| 36. | Dullinow QK | |
|------------|-----------------------|---|
| | Merchant Name | |
| VOC | DT ACADEMY SDN BHD VO | |
| Amount (N | IYR) | |
| 0.00 | | |
| Transfer F | irom * | |
| Please Se | lect | ÷ |
| | | |
| _ | | |
| | | |

Figure 79: DuitNow QR > Details

Step 4:

- 1. BSNeBiz Mobile display Confirmation page. Review the details on confirmation page and tap on "Pay Now" button.
- 2. BSNeBiz will call FHP and Predator to perform Risk Analysis process with require information.
- 3. BSNeBiz perform checking on action code from FHP and Predator analysis response:
 - a. IF risk analysis response action code **REJECT**, BSNeBiz Mobile App will throws error message "You are not allows to perform this transaction. Please contact BSNeBiz Contact Centre at 1300 88 1900 for assistance" and will redirect user to logout page.
 - b. IF risk analysis response action code is **OK** and user status is **APPROVE/UNLOCK**, a user is allows to skip the step-up authentication and the BSNeBiz Mobile App will redirect user to result screen at step 6.
 - c. IF risk analysis response action code **STEPUP**, the BSNeBiz Mobile App redirect user to security question screen for user to answer security question at next step 5.



| ÷ | DuitNow QR | |
|---------|--------------------|--|
| Merchan | t Name | |
| VOC DT | ACADEMY SDN BHD VO | |
| Amount | | |
| RM 8 | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
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| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | DAY NOW | |

Figure 80: DuitNow QR > Confirmation

Error messages for the screen:

| No | Action Code | Error Description in English |
|----|-------------|--|
| 1. | REJECT | Return error message "You are not allows to perform this |
| | | transaction. Please contact BSNeBiz Contact Centre at 1300 88 1900 |
| | | for assistance". |

Table 79: Fraud Alert - Return Error Message

Step 5:

- 1. Retrieve the security question and display to user.
- 2. User answer the question and tap on "Submit" button.
- 3. BSNeBiz request FHP and Predator to validate the submitted answer.
 - a. IF the response return "YES", indicate the answer is correct, BSNeBiz Mobile App will redirect user to step 6.
 - b. IF the response return "NO", indicate the answer is incorrect. BSNeBiz Mobile App perform checking on error counting.
 - i. UNLOCKED BSNeBiz request FHP and Predator to return next security question.
 - ii. LOCKED BSNeBiz throws error message "Access has been locked. Please contact BSNeBiz Contact Centre at 1300 88 1900 for assistance" and will redirect user to logout page.



| ← Security Question | | |
|--------------------------|--|--|
| ₿BSN | | |
| Question: | | |
| What is your pet's name? | | |
| Answer: | | |
| | | |
| C3 | | |
| | | |
| | | |
| | | |
| SUBMIT | | |
| | | |

Figure 81: Fraud Alert – Security Question screen

Display Specification:

| No | Field | Field Type | Description |
|----|-------------------|------------|------------------------------|
| 1. | Security Question | Text | Details of security question |

Table 80: Fraud Alert - Security Question Display Specification

Input Specification:

| No | Field | Field Type | Rule | Description | Required | | |
|----|---|------------|--------------|---------------------------------------|----------|--|--|
| 1. | Answer | Text Box | Alphanumeric | Input answer for security question | Yes | | |
| L | Table 81: Fraud Alert – Security Question Input Specification | | | | | | |

Action:

| No | Action | Туре | Description |
|----|--------|--------|---|
| 1. | Submit | Button | Contains an action to submit the data and system will |
| | | | process response. |

Table 82: Fraud Alert - Security Question Action

List of available messages for the screen:

| No | Event | Error Description in English |
|----|---|---------------------------------------|
| 1. | Submit empty field | Security Question answer is required |
| 2. | FHP and Predator return error incorrect | Security Question answer is incorrect |
| | answer | |



| No | Event | Error Description in English | |
|----|-------------------------------------|--|--|
| 3. | FHP and Predator return user status | Access has been locked. Please contact BSNeBiz | |
| | locked | Contact Centre at 1300 88 1900 for assistance | |

Table 83: Fraud Alert - Security Question Error Message

Step 6:

1. BSNeBiz Mobile App display result page.



Figure 82: DuitNow QR > Result



Section D: Internet Banking Administration Module (IBAM)

4 SOW03: Enhancement at IBAM

4.2 SOW03.1: To create new module at IBAM

| Function ID | SOW03.1 | | | | | |
|-------------|---|---------------------------------------|---|--|--|--|
| Module Name | BSNeBiz Fraud Management | IBAM > BBE > BSNeBiz Fraud Management | | | | |
| Description | To create new module at IBA Management Process | M level | that allow Bank Admin to maintain the Fraud | | | |
| | Bypass FHP and Predator | | | | | |

4.1.1 Process Flow



Diagram 18: BSNeBiz Fraud Management Process Flow

4.1.2 Screen Flow

Step 1:

- 1. BBE Admin accesses the Fraud Management page.
- 2. BBE Admin click on "Edit" button.



| NeBiz | |
|--|----------------------------|
| CDB Fraud Management | |
| Fraud Management | ✓ Completed (2) |
| HP : • On Off Predator : • On Off | Anthrity 10 #20415 - Edit. |
| | Edit |

Figure 83: Fraud Management page

Display Specification:

| No | Field | Field Type | Description |
|----|----------|------------|------------------|
| 1. | FHP | Text | FHP status. |
| 2. | Predator | Text | Predator status. |

Table 84: Fraud Management Display Specification

Action:

| No | Action | Field Type | Description |
|----|--------|------------|--|
| 1. | Edit | Button | Contains an action to go to the edit screen. |

Table 85: Fraud Management Action

Step 2:

1. BBE Admin able to on/off FHP and Predator and clicks on the "Next" button.



| CDB Fraud Management | 1 | | - V History | |
|----------------------|---------|--------|-----------------------------|--|
| | - | - | ✓ Completed (2) | |
| Details | Confirm | Result | Activity ID #20416 - Edit | |
| raud Management | | | Activity 10 120393 - Edit ' | |
| HP : | | | | |
| On Off | | | | |
| redator : | | | | |
| On Off | | | | |
| | | Back | Next | |



Input Specification:

| No | Field | Field Type | Rule | Description | Required |
|----|----------|------------|-----------|-----------------------------|----------|
| 1. | FHP | Radio | On or Off | Allow to on/off fraud alert | Yes |
| | | Button | | | |
| 2. | Predator | Radio | On or Off | Allow to on/off predator | Yes |
| | | Button | | alert | |

Table 86: Fraud Management – Details Input Specification

Action:

| No | Action | Туре | Description |
|----|--------|--------|--|
| 1. | Back | Button | Contain an action to go to previous page |
| 2. | Next | Button | Contains an action to save the data and go to next page. |

Table 87: Fraud Management - Details Action

Step 3:

1. BBE Admin review the details and click on "Confirm" button.



| SNeBiz | | | | |
|----------------------|---------|--------|---------------------------|--|
| CDB Fraud Management | | | - V History | |
| | - | - | ✓ Completed (2) | |
| 1 Details | Confirm | Result | Activity ID #20416 - Edit | |
| Fraud Management | | | Activity 1D #20393 - Edit | |
| FHP : | | | | |
| • On Off | | | | |
| Predator : | | | | |
| • On Off | | | | |
| | | Back | Confirm | |
| | | | | |
| | | | | |

Figure 85: Fraud Management – Confirm screen

Display Specification:

| No | Field | Field Type | Description |
|----|----------|------------|------------------|
| 1. | FHP | Text | FHP status. |
| 2. | Predator | Text | Predator status. |

Table 88: Fraud Management - Confirm Display Specification

Action:

| No | Action | Туре | Description |
|----|---------|--------|---|
| 1. | Back | Button | Contain the action to action to forward back to the previous |
| | | | screen |
| 2. | Confirm | Button | Forward the action to save the fields edited and go to Result |
| | | | screen |

Table 89: Fraud Management - Confirm Action

Step 4:

- 1. IBAM System validates save the data to IB Database and displays result page.
- 2. IBAM shows Successful message and pending for Authorization approval process (if customer BBE module maker checker permission set as 'Enable').



| šNeBiz | | · · · · · · · · · · · · · · · · · · · |
|---|-----------------------------|---------------------------------------|
| CDB Fraud Management | - History | - |
| | Completed (2) | |
| Image: Confirm control | Activity ID #20416 - Edit | |
| Fraud Management | Antivity 10 #20393 - Edit (| |
| Successful Fraud Management has been success | ful updated. | |
| | Back | |

Figure 86: Fraud Management – Result screen

Display Specification:

| No | Field | Format | Description |
|---|----------------|--------------|---------------------------------------|
| 1. | Result Message | Text, symbol | To display result status and message. |
| Table 90: Fraud Management - Posult Display Specification | | | |

Table 90: Fraud Management – Result Display Specification

Action:

| No | Action | Туре | Description |
|----|--------|--------|--|
| 1. | Back | Button | Contain an action to go to previous page |

Table 91: Fraud Management – Result Action



Section E: Appendix

E1: Traceability Matrix

Version Control

| No | BRFD Version | CR Version | CR Date |
|----|--------------|-------------------|------------|
| 1 | ver.00 | CR-23002 ver.01.1 | 19/05/2023 |

CR vs BRFD

| No | CR SOW ID | BRFD ID |
|----|------------|---------|
| 1. | SOW01 (I) | 2.1 |
| 2. | SOW01 (II) | 2.2 |
| 3. | SOW02 (I) | 3.1 |
| 4. | SOW02 (II) | 3.2 |
| 5. | SOW03 (I) | 4.1 |

E2: Related Item for Development

| CR SOW ID | Item |
|-----------|--|
| SOW01 | Development and Integration of BSNeBiz Web and Mobile i. To develop and integrate with FHP and Predator |
| SOW04 | Enhancement at Batch Program and Database i. To send batch file contains of company details to FHP and predator daily. |