

POS Test Cases for External Developers

New POS Test Cases



**Malawi
Revenue
Authority**

Test Category	Test Case ID	Test Title	Objective	Preconditions	Test Steps	Expected Results	Actual Results	Status  (Pass/Fail)	Notes	Priority	Executed By	Execution Date
Device Acquisition	TC-INV-001	Activate Terminal/ POS	Verify POS is successfully onboarded into the EIS	Terminal has network connectivity. Valid activation credentials available	Enter activation credentials. Complete onboarding process. Verify system registration	Terminal successfully registers with EIS		☐ Pass ☐ Fail		High		
Download Inventory	TC-INV-002	Get Terminal Site Products	Verify If POS is able to get products from MRA server.	Internet connectivity established	1. Initiate product sync. 2. Download product catalog	1. Products successfully downloaded 2. Product data matches server catalog 3. Inventory counts are accurate		☐ Pass ☐ Fail		High		
B2B And B2C Transaction	TC-INV-003	Make A Transaction	Verify if POS is able to make business to business transaction and business to customer transaction	POS is online for B2B, and for b2b all transactions should be online only not offline. NO b2b for offline.	1. Process B2B transaction 2. Process B2C transaction 3. Verify transaction types are recorded correctly	1. Both transaction types process successfully 2. Correct transaction type is recorded 3. Appropriate receipts generate		☐ Pass ☐ Fail		High		
Grouped Tax Rates Transaction (A, B and E)	TC-INV-003	Make A Transaction	Verify correct processing of grouped tax rates A, B, and E	Tax groups A, B, E configured 3. Test products assigned to each group	1. Process sale with Group A items 2. Process sale with Group B items 3. Process sale with Group E items 4. Process mixed group sale	1. Correct tax rates applied per group 2. Tax calculations are accurate 3. Receipt shows proper tax breakdown		☐ Pass ☐ Fail		High		
VAT Registration Status	TC-INV-003	Taxpayer Registration Type	Verify system handles different VAT registration statuses	Configurations saved from terminal activation	1. Process transactions for registered taxpayer 2. Process transactions for not VAT registered taxpayer 3. Verify status validation	Appropriate VAT treatment per status 2. Correct documentation generated on the Invoice 3. Status properly recorded		☐ Pass ☐ Fail		High		
Ping Server For Server Time	TC-INV-003	Use Server Side Time For Transactions	Verify POS uses server time for all transactions	1. Server connectivity established 2. Time sync configured	1. Process transaction 2. Check transaction timestamp 3. Compare with server time	1. Transaction uses server time 2. Time synchronization is accurate 3. No local time discrepancies		☐ Pass ☐ Fail		High		

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Inventory Management	TC-INV-004	Insufficient Quantity Prevention	Verify POS prevents sales when stock quantity is inadequate	1. POS system is operational 2. Test product exists in inventory 3. User has appropriate permissions	1. Set product inventory to 5 units 2. Attempt to sell 6 units 3. Attempt to sell 4 units	1. First attempt should be rejected 2. Second attempt should succeed 3. System should display appropriate error message for rejected transaction		☐ Pass ☐ Fail		High		
Discounts	TC-INV-004	Verify discount calculations and applications work correctly	1. POS system is operational 2. Discount rules configured	Discount rules configured	1. Apply percentage discount 2. Apply fixed amount discount	1. Discounts calculate correctly 2. Discount rules are enforced		☐ Pass ☐ Fail		High		
Tax Calculation Tests	TC-TAX-005	VAT Calculation Accuracy	Verify correct VAT calculation	1. POS system is operational 2. Test product exists in inventory 3. User has appropriate permissions	1. Process sale with items having different VAT rates including the 16.5 rate 2. Verify calculated VAT amounts	1. Only a sale calculated at VAT rate of 16.5 rate should pass 2. Total VAT is correctly summed 3. VAT appears correctly on receipt		☐ Pass ☐ Fail		High		
	TC-TAX-006	Tourism Levy Calculation (Hospitality Industry)	Verify correct tourism levy calculation	1. POS system is operational 2. Test product exists in inventory 3. User has appropriate permissions	1. Process hospitality service sale 2. Verify tourism levy calculation	1. Tourism levy is correctly calculated 2. Levy appears separately on receipt 3. Total amount includes levy correctly		☐ Pass ☐ Fail		High		
Offline Operation Tests	TC-OFF-007	Offline Transaction Functionality	Verify POS works offline with proper limitations	1. POS system is operational 2. Test product exists in inventory 3. User has appropriate permissions	1. Disconnect POS from network 2. Process multiple transactions 3. Reconnect and verify sync 4. Verify the inclusion of digital signatures.	1. Transactions process successfully offline 2. All offline transactions sync when connection restored 3. Proper offline indicator shown		☐ Pass ☐ Fail		High		
	TC-OFF-008	Time-Based Offline Threshold	Verify POS stops sales when offline time threshold is exceeded	1. POS system is operational 2. Test product exists in inventory 3. User has appropriate permissions	1. Disconnect POS from network 2. Attempt transactions approaching time threshold 3. Attempt transaction after threshold	1. Transactions work before threshold 2. POS blocks sales after threshold reached 3. Clear error message displayed		☐ Pass ☐ Fail		High		

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	TC-OFF-009	Amount-Based Offline Threshold	Verify POS stops sales when offline amount threshold is exceeded	1. POS system is operational 2. Test product exists in inventory 3. User has appropriate permissions	1. Disconnect POS from network 2. Process transactions approaching amount limit 3. Attempt transaction exceeding limit	1. Transactions work until threshold 2. POS blocks sales after threshold reached 3. Clear error message displayed			Dropped, no longer required		khumbo zimba	

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Configuration Management Tests	TC-CONF-010	Configuration Version Check	Verify POS updates configuration when outdated	1. POS system is operational 2. Test product exists in inventory 3. User has appropriate permissions 4. The taxpayer portal is up and running 5. User has an account on the portal	1. Login to the portal and change either taxpayer info, terminal info or global tax rates 2. Process a sale. 3. Verify configuration update	1. POS detects newer configuration coming as response from the server 2. New configuration is downloaded 3. POS operates with updated configuration		☐ Pass ☐ Fail		High		
Receipt Generation Tests	TC-REC-011	Receipt Barcode Generation	Verify proper qrcode generation on receipts	1. POS system is operational 2. Test product exists in inventory 3. User has appropriate permissions	1. Process transaction 2. Print receipt 3. Scan qrcode	1. Qrcode prints clearly 2. Qrcode contains correct transaction information 3. Qrcode is scannable 4. Qrcode points to the right URL		☐ Pass ☐ Fail		High		
	TC-REC-012	Qrcode URL Validation	Verify barcode links to correct transaction URL	1. POS system is operational 2. Test product exists in inventory 3. User has appropriate permissions	1. Scan receipt barcode 2. Follow URL 3. Verify transaction details 4. Verify that receipts have correct timestamp	1. URL is valid 2. URL leads to correct transaction 3. All transaction details match receipt		☐ Pass ☐ Fail		High		
Invoice Numbering Tests	TC-INV-013	Invoice Number Sequencing	Verify sequential invoice numbering	1. POS system is operational 2. Test product exists in inventory 3. User has appropriate permissions	1. Process multiple transactions 2. Check invoice numbers 4. Verify that receipts have correct timestamp	1. Numbers are sequential 2. Format matches requirements 3. No duplicate numbers		☐ Pass ☐ Fail		High		

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	TC-INV-014	Invoice Format Validation	Verify invoice number format compliance: {taxpayerId-terminalPosition-transactionDate-receiptSequentialNumber}	1. POS system is operational 2. Test product exists in inventory 3. User has appropriate permissions	1. Generate multiple invoices including one with an invalid format. 2. Check format of each	1. All numbers follow required format 2. Format remains consistent across all transactions 3. An invoice with an invalid format should be denied sales data transmission		☐ Pass ☐ Fail		High		
Block Terminal	TC-INV-014	Block Terminal	Block Terminal	Check for terminal Block For Each and every transaction	Attempt transaction processing	1. Block terminal if the condition is true. 2. extract terminal block message 3. display message to taxpayer.						
Relief Supply Tests	TC-RS-015	Handling of Relief Supply	Verify removal of VAT from standard rated item prices	1. POS system is operational 2. Test product exists in inventory with all VAT rates 3. User has appropriate permissions	1. Start a transaction with items having different VAT rates including the 16.5 (S)rate, Exempt (E), Zero-rated (B) 2. Mark it as a relief supply	1. VAT should be removed from the selling price of items taxed at standard rate (16.5) 2. Prices for exempted and zero-rated should remain intact.		☐ Pass ☐ Fail		High		
	TC-RS-016	Validation of VAT 5 Certificate. (CONT'D from TC-RS-001)	Verify that VAT certificate is valid	1. POS system is operational 2. Test product exists in inventory with all VAT rates 3. User has appropriate permissions	1. Try to submit the relief supply transaction without VAT 5 certificate number. 2. Try to submit the relief supply transaction with an invalid VAT 5 certificate number. 3. Try to submit the relief supply transaction with a valid VAT 5 certificate number.	1. Transaction should fail (POS should deny the sale before requesting the API) for step 1. 2. Transaction will fail for any invalid certificate number for step 2. 3. Transaction will pass for any valid certificate number for step 3.		☐ Pass ☐ Fail		High		

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Usability Tests	TC-UT-017	Use of different devices	Use of different devices	Mobile POS (android, iPhone) 2. Desktop POS (windows, Mac) 3. Web POS 4. Cash Registers (Electronic Cash Register Drawer for Point of Sale (POS), Touchscreen Monitor POS System, Cash Drawer, Square POS) 5. Thermal Printer (30mm Printer,40 mm Printer,50mm Printer,80mm Printer) 6. Bluetooth Printers	1. Consume the EIS Terminal Api from all devices 2. Do a hardware integration	1. POS should successfully consume the API and successfully display response message from MRA API from all devices 2. Receipts should be printed from all types of printers 3. Cash drawer should work accordingly.		☐ Pass ☐ Fail		High		
Test Case Execution Summary:												
Total Test Cases:												
Passed:												
Failed:												
Not Executed:												
Pass Rate:												
Test Data Requirements												
- Sample product inventory with various quantities downloaded from MRA - Products with different VAT rates - A valid VAT 5 Certificate generated from Msonkho Online. - Hospitality services for tourism levy testing - Valid configuration versions - Defined offline thresholds (time and amount) data as part of Terminal Activation Response - Expected invoice number format												
Pass/Fail Criteria												
- All test cases must pass for certification - No critical bugs or issues identified - All calculations must be 100% accurate - All thresholds must work as specified - Receipt generation must be reliable - Offline functionality must work within specified limits - Relief supply should work for valid certificates.												

