Testing Guide for TWS Bridge Fixes

Quick Start

1. Verify the Fixes

```
cd /home/ubuntu/tws_electron_app
python3 test_bridge.py
```

Expected output: All checks should pass ✓

2. Start TWS/IB Gateway

- Open TWS or IB Gateway (Paper Trading mode recommended)
- Go to File → Global Configuration → API → Settings
- Ensure "Enable ActiveX and Socket Clients" is checked
- Set Socket Port to 7496 (default)
- Add 127.0.0.1 to Trusted IP Addresses if needed
- Click OK and restart TWS if needed

3. Start the Electron App

```
cd /home/ubuntu/tws_electron_app
npm start
```

4. Connect and Test

Connection

Use these parameters (as shown in your screenshot):
- **Host:** 127.0.0.1
- **Port:** 7496
- **Client ID:** 1

Click "Connect" button.

Expected Results After Connection:

1. ✅ Connection status shows "Connected"
2. ✅ Balance displays immediately (e.g., "$10,000.00")
3. ✅ Green "Connected" indicator

Test Cases

Test 1: Balance Display ✓

What to test: Account balance shows after connection

Steps:

1. Connect to TWS using the connection form
2. Look at the "Account Balance" field

Expected:

- Balance displays immediately after connection
- Shows actual account balance from TWS (e.g., "$10,234.56")
- No more "$–" placeholder

Debug if fails:

Press F12 in Electron app and check:
- Main console for: "Python stdout: {success: true, balance: X, requestId: …}"
- Look for Python stderr showing: "Getting balance…" and "Found NetLiquidation: X"

Test 2: Order Placement Response ✓

What to test: Order placement returns immediate response

Steps:

1. Connect to TWS
2. Fill in order form:
- Ticker: SPY
- Expiry: (select future date)
- Strike: (select strike price)
- Type: Call or Put
- Quantity: 1
- Action: Buy
3. Click "Buy Market Order"

Expected:

- ✅ Success message appears immediately
- ✅ No timeout error
- ✅ Order appears in TWS order book

Debug if fails:

Press F12 and check:
- Look for "Handling command: place_order with requestId: X"
- Look for "Sent response: {success: true, …, requestId: X}"
- Verify requestId matches in both messages

Test 3: Positions Display ✓

What to test: Positions show in the positions table

Prerequisites:

- Have at least one active position in TWS

Steps:

1. Connect to TWS
2. Look at the "Positions" section

Expected:

- ✅ Positions table shows your active positions
- ✅ Each row shows: Symbol, Position, Avg Cost, Market Value, Unrealized P&L
- ✅ "Close Position" button available for each

Debug if fails:

Press F12 and check:

- Look for "Getting positions..."
- Look for "Got X positions from TWS"
- Verify X matches number of positions you have in TWS

Debugging Tools

1. Electron DevTools

Press **F12** in the Electron app to open DevTools

Console tab:

- Shows all Python stdout messages
- Shows response objects with requestId
- Shows any JavaScript errors

Example healthy output:

```
Python stdout: {"success":true,"balance":10000,"requestId":1731614400.123}
Python stdout: {"success":true,"positions":[...],"requestId":1731614400.456}
```

2. Python Stderr Logs

Python bridge logs go to stderr (shown in Electron console)

Example healthy output:

```
Python stderr: Bridge ready, waiting for commands...
Python stderr: Handling command: get_balance with requestId: 1731614400.123
Python stderr: Getting balance...
Python stderr: Got 50 account values from TWS
Python stderr: Found NetLiquidation: 10000.0
Python stderr: Sent response: {"success":true,"balance":10000.0,"requestId":
1731614400.123}
```

3. Common Issues and Solutions

Issue: Balance still shows "$-"

Possible causes:

1. TWS not connected properly
2. Paper Trading account has no simulated balance
3. requestId still missing (check logs)

Solutions:

1. Check TWS is fully started and showing green "Connected" status

2. In TWS, go to Account → Account Window to verify balance exists

3. Check DevTools console for error messages

Issue: Orders still timeout

Possible causes:

1. TWS not accepting API orders

2. Contract details incorrect

3. Network issue

Solutions:

1. In TWS, verify API settings allow order placement

2. Check Python stderr for error messages about contract

3. Try a simple stock order first (e.g., BUY 1 SPY stock)

Issue: Positions don't show

Possible causes:

1. No actual positions in TWS

2. Positions API not enabled

3. Contract details not parsing correctly

Solutions:

1. Verify positions exist in TWS Portfolio window

2. Check Python stderr for "Got X positions" message

3. Look for any error messages in position processing

Understanding the Logs

Successful Balance Fetch

```
# Electron sends command
→ Command sent to Python: {type: 'get_balance', requestId: 1731614400.123}

# Python processes
Python stderr: Handling command: get_balance with requestId: 1731614400.123
Python stderr: Getting balance...
Python stderr: Got 50 account values from TWS
Python stderr: Found NetLiquidation: 10000.0

# Python responds
Python stdout: {"success":true,"balance":10000.0,"requestId":1731614400.123}

# Electron receives
← Response received, balance updated to $10,000.00
```

Successful Order Placement

```
# Electron sends command
→ Command sent to Python: {type: 'place_order', data: {...}, requestId: 1731614400.45
6}

# Python processes
Python stderr: Handling command: place_order with requestId: 1731614400.456
Python stderr: Placing order: {action: 'BUY', ticker: 'SPY', ...}

# Python responds
Python stdout: {"success":true,"message":"BUY order placed...","requestId":1731614400.
456}

# Electron receives
← Response received, success message shown
```

Performance Expectations

- **Connection time:** 2-5 seconds
- **Balance fetch:** < 1 second
- **Order placement response:** < 2 seconds
- **Positions fetch:** < 2 seconds

If operations take longer than 5 seconds, check TWS network connection and API configuration.

Files Reference

File	Purpose
`tws_bridge.py`	Main Python bridge (fixed)
`test_bridge.py`	Test script to verify fixes
`BUGFIX_SUMMARY.md`	Detailed explanation of fixes
`TESTING_GUIDE.md`	This file

Need More Help?

1. Run the test script: `python3 test_bridge.py`
2. Check BUGFIX_SUMMARY.md for technical details
3. Review logs in Electron DevTools (F12)
4. Ensure TWS API is properly configured