

ModernFi SFTP Configuration Guide

Overview

This guide helps financial institutions securely establish Secure File Transfer Protocol (SFTP) connections with ModernFi to automate daily data exchanges as part of the ModernFi deposit network program. These exchanges include:

- Sending transaction data *to* ModernFi (**Outbound**), and
- Receiving account balances, withdrawal, and accounting data *from* ModernFi (**Inbound**)

By following these steps, you'll streamline the data sharing process, eliminating the need for manual report generation and uploads through ModernFi's Admin Portal.

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1. Critical Setup Considerations

To help ensure your SFTP integration with ModernFi is seamless, we've compiled a short list of key details that are essential for the successful setup of ongoing file transfers.

- **File naming conventions and formats must be strictly followed; all column headers should be included as-is (including optional fields) and data formats should match template files provided.**
- **The /tests/ folder should be used for all testing of Transactions file transfers.** All other folders are linked to Production, so any files sent to them are assumed to be for live accounts and actual money movement requests.
- **Outbound SFTP files must be delivered to ModernFi by 1pm ET daily** to ensure ample time for the resolution of any file configuration and/or delivery issues with live partners. Money movement requested in Transactions files delivered and ingested into ModernFi's systems on weekend days will be incorporated into the next business day's network allocation (usually Monday, unless it's a holiday). Transactions files delivered on business days will be allocated same day.
- ModernFi does not delete files it sends or receives through SFTP. While institutions can delete inbound files, ModernFi does not allow for the deletion of Transactions files, which can be delineated by the date included in the file name.

2. Getting Started

What We Need from You

- **First, your institution's external IP address for firewall whitelisting.**
- Confirmation of your preferred automation process (i.e., whether Inbound files will be hosted on ModernFi's or your servers).
- Your SFTP server details if you want Inbound files pushed to your system.

What ModernFi Will Provide

- SFTP connection details: host, port, and username.
- Private key for authentication, sent securely via SendSafely.
- SSH public key (for Inbound file delivery to your server).
- Standardized CSV file templates with required and optional fields.

Security Best Practices

- Use key-based authentication exclusively.
 - Never share private keys via email or insecure channels.
 - Request and whitelist ModernFi's IP address for connections.
 - Use SendSafely for secure key delivery.
 - Monitor transfers and automate alerts for failures.
 - Ensure compliance with internal and regulatory data security policies.
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3. SFTP Outbound: Sending Data to ModernFi

Use Cases

- Submitting daily transaction data for automated money movement into and out of the network (through the **/transactions/** file)

Key Points

- Files are uploaded to ModernFi's SFTP server: sftp.prod.modernfi.com.
 - Use key-based authentication with the private key provided via SendSafely.
 - Upload designated files to their respective folders:
 - **/tests/**
 - **/transactions/**
 - **Frequency:** ModernFi runs its SFTP workflow every day at 1pm ET.
 - **Timing:** Outbound SFTP files must be delivered to ModernFi by 1pm ET.
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4. SFTP Inbound: Receiving Data from ModernFi

Use Cases:

- Streamlining the delivery of depositor funds back from the network to their primary operating account (through the **/withdrawals/** file)
- Ingesting data related to depositor funds allocated throughout the network for internal settlement and reporting purposes (through the **/balances/** file)
- Automate consistent, transparent, and accurate financial reporting of institution network activity (through the **/gl_postings/** file)

Key Points

- **Option 1:** ModernFi pushes files to your SFTP server.
 - Provide your server host, username, and whitelist ModernFi's IP.
 - ModernFi sends files after processing:
 - Withdrawals after allocation (by 5pm ET, **/withdrawals/** folder).
 - Balances and GL Postings by 8pm ET daily (**/balances/** and **/gl_postings/** folders). In practice, these arrive by 5pm ET most days.
- **Option 2:** You pull files from ModernFi's SFTP server.
 - Access **/balances/** and **/withdrawals/** folders on ModernFi's server.
 - Download files after scheduled times.

5. File Format Specifications

Outbound Files (To ModernFi)

| File Type | Folder | Naming Convention (case sensitive) | Frequency | Description |
|--------------|-----------------------|------------------------------------|-----------------|---------------------|
| Transactions | /transactions/ | TRANSACTIONS_YYYY-MM-DD.csv | Daily (24-hour) | Transaction records |

Transactions File Fields

| Field Name | Required | Data Type / Length | Description |
|------------------------------|----------|---|---|
| institution_sweep_account_id | Yes | Varchar (64) | Internal institution account ID on the core for the depositor's sweep account |
| amount | Yes | Decimal (15,2) | Positive for deposits, negative for withdrawals, numeric values only (no commas or symbols) |
| transacted_at | Yes | Datetime (UTC ISO 8601) (e.g., 2025-01-27T14:30:00Z) | Transaction timestamp for when it posted at the FI |
| institution_transaction_id | Yes | Varchar (128) | Unique transaction ID in the FI's systems |
| description | No | Varchar (256) | Optional free-text transaction details |

Inbound Files (From ModernFi)

| File Type | Folder | Naming Convention (case sensitive) | Frequency | Description |
|-------------|---------------|------------------------------------|---------------------|-------------------------|
| Balances | /balances/ | BALANCES_YYYY-MM-DD.csv | Daily at 8:00pm ET | Account balances |
| Withdrawals | /withdrawals/ | WITHDRAWALS_YYYY-MM-DD.csv | Daily ~5pm ET | Withdrawal transactions |
| GL Postings | /gl_postings/ | GL_POSTINGS_YYYY-MM-DD.csv | Daily at 8:00 pm ET | GL entries |

Balances File Fields

| Field Name | Required | Date Type / Length | Description |
|------------------------------|----------|---|---|
| institution_sweep_account_id | Yes | Varchar (64) | Internal institution account ID on the core for the depositor's sweep account |
| balance | Yes | Decimal (15,2) | Current account balance, numeric values only (no commas or symbols) |
| timestamp | Yes | Datetime (UTC ISO 8601) (e.g., 2025-01-27T14:30:00Z) | Timestamp for transaction processing at the FI |
| description | Yes | Varchar (256) | Description of balance entry |
| mtd_balance | Yes | Decimal (15,2) | Month-to-date average daily balance, numeric values only (no commas or symbols) |
| interest_accrued_today | Yes | Decimal (15,2) | Interest accrued today, numeric values only (no commas or symbols) |
| interest_accrued_mtd | Yes | Decimal (15,2) | Interest accrued month-to-date, numeric values only (no commas or symbols) |
| agg_monthly_apy | Yes | Decimal (5,4) | Aggregate monthly APY (decimal, e.g. 0.04 is 4%) |

Withdrawals File Fields

| Field Name | Required | Date Type / Length | Description |
|-------------------------------|----------|---|--|
| institution_sweep_account_id | Yes | Varchar (64) | Internal institution account ID on the core for the depositor's sweep account |
| institution_return_account_id | Yes | Varchar (64) | ID for the account to which the depositor wants to return funds withdrawn from the network (i.e., the ID on your core for their primary operating account) |
| amount | Yes | Decimal (15,2) | Positive for deposits, negative for withdrawals, numeric values only (no commas or symbols) |
| transacted_at | Yes | Datetime (UTC ISO 8601) (e.g., 2025-01-27T14:30:00Z) | UTC ISO 8601 timestamp for when the transaction posted in the network allocation |
| modernfi_transaction_id | Yes | Varchar (36) | ModernFi-generated unique transaction ID |
| description | No | Varchar (256) | Optional free-text withdrawal details |

GL Postings Fields

| Field Name | Required | Date Type / Length | Description |
|----------------|----------|---------------------------------------|------------------------------------|
| Account Title | Yes | Enum (see sample file) | Name of the General Ledger Account |
| Entry Type | Yes | Enum (Dr,Cr) | Indicates Debit or Credit |
| GL Code | Yes | Varchar (64) | Internal identifier for GL Account |
| Effective Date | Yes | Date (ISO 8601) (e.g., 2025-01-27) | Date of entry (YYYY-MM-DD) |
| Amount | Yes | Decimal (15,2) | Dollar amount of GL entry |

6. Setup and Configuration

Receiving Credentials and Keys

- Private keys for SFTP authentication will be sent securely via SendSafely.
- You will receive your username and the SFTP host address (sftp.prod.modernfi.com).

Configuring Your SFTP Client

- Use your preferred SFTP client (FileZilla, WinSCP, command-line).
- Configure connection with:
 - Host: sftp.prod.modernfi.com
 - Port: 22
 - Username: Provided by ModernFi
 - Authentication: Use the private key from SendSafely

Testing and Automation

- Test connectivity by uploading/downloading test files to and from the **/tests/** folder across transfer types.
 - Automate daily file generation and transfer according to the specified schedules and naming conventions.
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7. Troubleshooting

- Ensure private key permissions are set correctly:

```
1. bash
2. chmod 600 private_key.pem
```

- Command-line connection example:

```
1. bash
2. sftp -i {{YourInstitutionName}}_private_key.pem sftp-user-
{{YourInstitutionName}}@sftp.prod.modernfi.com
```

- For connection or file issues, verify IP whitelisting and firewall settings.

8. Support

If you encounter any issues during the setup process or have questions, please contact ModernFi's support team (support@modernfi.com) or your dedicated Account Manager for assistance.