

## 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 account, depositor, and transaction data *to* ModernFi (**Outbound**), and
- Receiving account balances and withdrawal 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, including all column headers are included as is and data formats match template files provided.**
- **The /tests/ folder should be used for all testing purposes across Accounts, Depositors, and Transactions Outbound file transfer tests.** 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.
- ModernFi runs its allocations at 2pm ET each day the Federal Reserve Bank of NY is open; **Outbound SFTP files must be delivered to ModernFi by 1pm ET on allocation days** to ensure ample time for the resolution of any file configuration and/or delivery issues with live partners. Money movement requested in Outbound SFTP 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).

## 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.

## 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)
- Automating the onboarding of new accounts and depositors (through the **/accounts/** and **/depositors/** files, **recommended when program is at scale and onboarding many new accounts**)

### 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/**
    - **/accounts/**
    - **/depositors/**
    - **/transactions/**
  - **File naming conventions and formats must be strictly followed, including all column headers are included as is and data formats match template files provided.**
  - **Frequency:** ModernFi runs its network allocation each day the Federal Reserve Bank of New York is open at 2pm ET. We will need one batch file per allocation day capturing all data since the previous allocation.
  - **Timing:** Outbound SFTP files must be delivered to ModernFi by 1pm ET on allocation days. **Outbound SFTP files must be delivered to ModernFi by 1pm ET on allocation days** to ensure ample time for the resolution of any file configuration and/or delivery issues with live partners.
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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)

### 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:
      - Balances by 8pm ET daily (**/balances/** folder).
      - Withdrawals after allocation (by 5pm ET, **/withdrawals/** folder).
  - **Option 2:** You pull files from ModernFi's SFTP server.
    - Access **/balances/** and **/withdrawals/** folders on ModernFi's server.
    - Download files after scheduled times.
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## 5. File Format Specifications

### Outbound Files (To ModernFi)

File Type	Folder	Naming Convention (case sensitive)	Frequency	Description
Accounts	<b>/accounts/</b>	ACCOUNTS_YYYY-MM-DD.csv	Daily (24-hour)	Account details
Depositors	<b>/depositors/</b>	DEPOSITORS_YYYY-MM-DD.csv	Daily (24-hour)	Depositor details
Transactions	<b>/transactions/</b>	TRANSACTIONS_YYYY-MM-DD.csv	Daily (24-hour)	Transaction records

**Accounts File Fields**

Field Name	Required	Description
institution_sweep_account_id	Yes	Internal institution account ID on the core for the depositor's sweep account
institution_return_account_id	Yes	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)
signer_primary	Yes	Primary signer's name
account_title	Yes	Account title
interest_rate	Yes	Interest rate as numeric (e.g., 4.0 for 4%)
account_type	Yes	Account type: "DDA" or "MMDA"
signer_secondary	No	Secondary signer's name
beneficiary_name	No	Beneficiary's name
beneficiary_tin	No	Beneficiary's Tax ID
institution_branch_id	No	Branch identifier
closed_at	No	Account close date/time, in UTC ISO 8601 format
signer_primary_tin	No	Primary signer's Tax ID
notes	No	Optional free-text account details

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**Depositors File Fields**

Field Name	Required	Description
institution_sweep_account_id	Yes	Internal institution account ID on the core for the depositor's sweep account
institution_depositor_id	Yes	Unique depositor ID
tin	Yes	Depositor's Tax ID
entity_name	Yes	Organization name or NULL
street	Yes	Street address
city	Yes	City
state	Yes	State/province
zip	Yes	Postal/ZIP code
country_code	Yes	2-letter country code (e.g., "US")
phone_number	Yes	Phone number
is_primary_phone_number	Yes	TRUE/FALSE: primary phone?
email_address	Yes	Email address
is_primary_email	Yes	TRUE/FALSE: primary email?
first_name	No	Depositor's first name
last_name	No	Depositor's last name
closed_at	No	Close date/time, in UTC ISO 8601 format

**Transactions File Fields**

Field Name	Required	Description
institution_sweep_account_id	Yes	Internal institution account ID on the core for the depositor's sweep account
amount	Yes	Positive for deposits, negative for withdrawals, numeric values only (no commas or symbols)
transacted_at	Yes	Transaction timestamp for when it posted at the FI, in UTC ISO 8601 format
institution_transaction_id	Yes	Unique transaction ID in the FI's systems
description	No	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

**Balances File Fields**

Field Name	Required	Description
institution_sweep_account_id	Yes	Internal institution account ID on the core for the depositor's sweep account
balance	Yes	Current account balance, numeric values only (no commas or symbols)
timestamp	Yes	Timestamp for transaction processing at the FI, in UTC ISO 8601 format
description	Yes	Description of balance entry
mtd_balance	Yes	Month-to-date average daily balance, numeric values only (no commas or symbols)
interest_accrued_today	Yes	Interest accrued today, numeric values only (no commas or symbols)
interest_accrued_mtd	Yes	Interest accrued month-to-date, numeric values only (no commas or symbols)
agg_monthly_apy	Yes	Aggregate monthly APY (decimal, e.g. 0.04 is 4%)

**Withdrawals File Fields**

Field Name	Required	Description
institution_sweep_account_id	Yes	Internal institution account ID on the core for the depositor's sweep account
institution_return_account_id	Yes	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	Positive for deposits, negative for withdrawals, numeric values only (no commas or symbols)
transacted_at	Yes	UTC ISO 8601 timestamp for when the transaction posted in the network allocation
modernfi_transaction_id	Yes	ModernFi-generated unique transaction ID
description	No	Optional free-text withdrawal details

## 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
3. sftp-user-{{YourInstitutionName}}@sftp.prod.modernfi.com
```

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

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