SFTP CONNECTIVITY STANDARDS

Connectivity Standards
Representing Bloomberg's
Requirements for SFTP
Connectivity.

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Bloomberg

BLOOMBERG SFTP CONNECTIVITY STANDARDS

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Overview

BB-SFTP Functionality

BB-SFTP enables a set of Bloomberg-provided SFTP accounts to be used for transferring files. Access to BB-SFTP is restricted to SFTP Users. SFTP Users may use dedicated/leased lines or the Internet to access BB-SFTP.

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Bloomberg SFTP Connectivity Standards

- The Bloomberg SFTP Connectivity Standards set forth the connectivity standards for Bloomberg clients or third parties (collectively, "SFTP Users") authorized to use Bloomberg's secure file transfer infrastructure ("BB-SFTP"). This document details responsibilities and requirements for SFTP Users to use BB-SFTP. SFTP Users must review and comply with these Connectivity Standards in order to use BB-SFTP.
- Bloomberg will periodically review and update these Connectivity Standards.
- Access to BB-SFTP is only permitted from IP address previously provided by SFTP Users to Bloomberg; that IP address will be used to create an account-specific IP address whitelist.
- SFTP Users are responsible for configuration changes within their own environments and for ensuring that they make any necessary changes to their firewalls to enable BB-SFTP access.
- SFTP Users should regularly review their own application security controls.
- Bloomberg may suspend the account of any SFTP User at any time.

Connectivity Requirements

SFTP Users must agree to operate within the best practices guidelines below and data limits currently in place for BB-SFTP.

SFTP Password Requirements

- Have a minimum length of 16 ASCII characters and maximum of 30 ASCII characters
- Must contain at least one of the following characters: _ % + = [] , . { }
- Must contain at least one upper case letter, one lower case letter and one number
- May not contain a space
- May not contain these characters: \$\`&() < ">|; '^*?: #@!
- May not contain non-printable characters
- Passwords will expire 18 months after their creation
- Must be stored securely and should only be shared with authorized individuals

IP Whitelisting Requirements

Access to BB-SFTP is only permitted from an IP address previously provided to Bloomberg;
 that IP address will be used to create an account-specific IP address whitelist.

- SFTP Users need to provide their DR IP address(es) to Bloomberg to ensure that they are included in the associated account.
- IP whitelists can be configured as follows:
 - a. The standard whitelisting bracket is:
 - i. 5 or fewer IP addresses (specified individually);
 - ii. 5 or fewer sets of IP addresses (specified in CIDR notation); or
 - iii. Up to a total of 1,280 IP addresses (specified in any combination of individual entries or CIDR notation)
 - iv. Accounts in this category may use a key or a password (or both) for authentication
 - b. Non-standard whitelisting bracket requiring an SSH key for authentication
 - i. Accounts requiring a whitelist of more than 1,280 IP addresses must use an SSH key **and not a password** for authentication

Public Keys

- Where SFTP Users authenticate using an SSH key, it should meet the following criteria:
 - a. Key Type: SSH-RSA
 - b. Strength: SSH keys for SFTP must at minimum be 2,048-bit RSA public keys with a recommendation of 4,096 bits
 - c. Public Key Format: OPENSSH, single-line format
 - d. SFTP Users need to supply Bloomberg with their public keys
 - e. Keys must be stored securely and should only be shared with authorized individuals

Login Sessions

For each *login* session made for a connection via SFTP, a *corresponding logout* is expected.

Polling of Directories and File Transfer Rate

- SFTP Users may not poll their directories more than once per minute. If a higher frequency
 of polling is desired, then an alternate real-time form of connectivity is required.
- Maximum number of file transfers per account per hour not to exceed 300.
- The above rates are subject to change.

Account Disablement

 Any account not accessed in more than 6 months will be deleted and all associated files will be removed.

Storage

SFTP Users are generally permitted a maximum of 5GB per account.

- Users of certain Bloomberg products, such as Data License, are allowed more per account.
- Files stored on BB-SFTP may be deleted on a rolling 30-day basis.
- BB-SFTP is a store and forward system, it does not archive files; this is the responsibility of SFTP Users.

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IP Proxies

• In the scenario where SFTP Users are funneling all their SFTP sessions through a few proxy IPs, they may encounter a per-IP session limit. In this situation, SFTP Users will need to direct their excess SFTP traffic through additional IP proxies as session limits per IP will not be raised

Outline of Steps to Connect to Bloomberg via SFTP

Download an SFTP Client

• SFTP client software to send and download files is available for a variety of environments. Bloomberg does not endorse or mandate the use of a specific client, but provides the below list as a convenience.

Commercial Products	Free/Open Source Products
 CuteFTP Tectia SSH Client Bloomberg Request Builder (Data License clients only) 	 FileZilla (Windows, Mac, Linux) WinSCP Putty/Psftp OpenSSH suite (UNIX)

Firewall Changes

• SFTP Users may need to make network changes to allow access to the BB-SFTP servers on port 22.

Connectivity via Internet to Bloomberg SFTP Servers

Host Name	IP Address	Port	Connection Type	Region
sftp.bloomberg.com	205.216.112.23	22	Internet	Global
sftp.blpprofessional.com	208.22.57.176	22	Internet	China

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For Internet connectivity, clients are advised to use DNS **sftp.bloomberg.com** and not use IP addresses directly. In the event that one server becomes unavailable, **sftp.bloomberg.com** will always point to another available server. SFTP Users' Internet-facing IP addresses need to be whitelisted with Bloomberg as described above.

Connectivity via Leased/Dedicated Lines to Bloomberg SFTP Servers

Host Name	IP Address	Port	Connection Type	Region
Use IP Provided	160.43.94.78	22	Virtual IP NY/NJ Failover	New York, Tokyo & Asia Pac
Use IP provided	160.43.94.20	22	Dedicated Lines (NY)	New York, Tokyo & Asia Pac
Use IP provided	160.43.166.57	22	Dedicated Lines (NJ)	New York, Tokyo & Asia Pac
Use IP provided	160.43.94.77	22	EMEA Failover	London/EMEA
Use IP provided	160.43.94.24	22	Dedicated Lines (NY)	London/EMEA
Use IP provided	160.43.166.58	22	Dedicated Lines (NJ)	London/EMEA

Clients connecting over their Bloomberg Leased/Dedicated lines should connect to the above IP addresses depending on which region they are connecting from.

Failover

The failover addresses provided above will switch between Bloomberg data centers as needed, with automatic failover provided by Bloomberg. For use cases where a client wishes to restrict itself to one data center vs. another, the IPs are provided in the (NY) and (NJ) lines. Be aware that when using these addresses, it is the client's responsibility to switch between data centers if needed. Clients are **strongly** encouraged to use the failover addresses.

Note: At this time, full data replication between data centers is not yet in place, it is being addressed. If a client chooses to use the new Virtual IP above, it should be aware of this limitation. For example, a client renaming or deleting a file on its NY account should do the equivalent on its NJ account in order for its accounts to remain in sync.

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Additional Connections

• Certain business units such as News or Exchange feeds may provide a different set of servers than the above listed, generally used SFTP servers. SFTP Users of these services should confirm IP addresses to connect to with their relationship manager.

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