



Shipping & Mailing
Postage Meters

Connect+/SendPro™ P Series

Networking Technical Specification

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Introduction

This document details the networking technical considerations for the Connect+/SendPro™ P Series.

Network Requirements

- The Connect+/SendPro system will require a high-speed network connection.
- The Connect+/SendPro system will initiate all communication.
- The Connect+/SendPro system will initiate all communication (via HTTP or HTTPS), so it can safely sit behind most corporate firewalls.
- The Connect+/SendPro system will communicate to external Web Services via HTTP over Port 80.
- The Connect+/SendPro system will communicate to PB secure server(s) via HTTPS over port 443.
- The Connect+/SendPro system will use Port 53 for DNS lookup.
- Pitney Bowes requires a minimum network bandwidth of 384 kbps (upstream and downstream) to operate, but we recommend 1 Mbit/sec for best performance.
- It is recommended that DSL or 3G modem devices are not shared across multiple Connect+/SendPro systems.
- Customer owned web filtering devices or software, as well as SSL packet inspection should be disabled for these ports as they can affect performance.

Port/Communication Requirements

All communication is initiated from the Connect+/SendPro system via ports 80 (HTTP) and 443 (HTTPS). All communication from the Connect+/SendPro system to the back end system is in the form of XML messages.

Port 80 (HTTP)

- OS Update
- AV Updates
- Web Browsing (Help)
- TeamViewer

Port 443 (HTTPS)

- Connect+ will send requests to refill or audit its PSD (Postal Security Device) based on a low funds or inspection date. (Refills currently occur when the PSD funds drop below \$xxx.xx. Audits occur if the PSD inspection date has expired.)
- During initial install, the system will automatically request an Operational Block, from the infrastructure, for the PSD.
- On PSD replacement the System will automatically request the configuration data for the replacement PSD.
- Transaction Records from the Connect+/SendPro system are automatically uploaded when:
 - The System has been idle for a period of 10 minutes
 - While powering down the system.
 - Web Accounting Services.
- On power up the System freshens the Web Service (Supplies, My Account, Tracking etc.) configuration data.
- Software, Rates and Graphic updates.

Port 53

- DNS lookup
 - IT departments that use a "rules based" method for allowing specific ports to pass traffic on their network for port 53 and make sure to allow BOTH UDP and TCP traffic for this port. Port 53 listens for DNS requests and may respond on either protocol, based on the type of request it receives. Short responses should come in over UDP. Longer, more detailed responses on TCP.

URL

The following URLs must be accessible from the Connect+/SendPro system, without any obstructions. It is strongly recommended that the firewall reference the URL rather than IP address, which can change over time. If IP addresses must be referenced, it is suggested to keep open the block of IP addresses 199.231.32.0 to 199.231.47.255, 152.144.128.0 to 152.144.128.255, 209.85.128.000 to 209.85.255.255.

The table below summarizes the list of required and optional firewall port exceptions. It is suggested to open all the optional services as the Connect+ machine normally ships with all the options enabled. Customers can request certain options to be disabled. Please check with the owner of the machine to determine if certain functions have been disabled and can therefore be left out of the firewall exception rules.

URL Table

Function	Description	Required/ Optional	Firewall Exception Rule(s)
Connect+ Network Test/ Linux Proxy Test	Built in tools that pings select PB servers for connectivity testing. Used by PB Service (Resides on Linux Desktop)	Required	<ul style="list-style-type: none"> • Network Test <ul style="list-style-type: none"> ◦ http://www.google.com (Domain www.google.com; IP=72.14.253.104) ◦ http://www.l.google.com (Domain www.google.com; IP=74.125.230.81, 74.125.230.82, 74.125.230.83, 74.125.230.84, 74.125.230.80) ◦ http://www.novell.com • SUSE Linux Proxy Test (Domain ftp.novell.com; IP=130.57.1.88)
Distributor	Main PB Server that authenticates machine for access to other PB web services	Required	<ul style="list-style-type: none"> • Distributor: http://distserv1.pb.com/dstproduct.asp https://distserv1.pb.com/dstproduct.asp (Domain distserv1.pb.com; IP=152.144.128.244, 152.144.128.230, 199.231.44.31, 199.231.43.31, 199.231.45.46)
Funds (Funds Management & Refills)	Funds are managed through a separate Funds Server system	Required	<ul style="list-style-type: none"> • http://cometserv1.pb.com/T3cometserver_03.asp • https://cometserv1.pb.com/T3cometserver_03.asp (Domain cometserv1.pb.com; IP=152.144.128.230, 152.144.128.236, 199.231.45.37, 199.231.43.215)

Function	Description	Required/ Optional	Firewall Exception Rule(s)
Rates and Updates (Download Services)	Downloads new SW, graphics, rate price data etc.	Required	<ul style="list-style-type: none"> Misc. Data Upload: https://pbgdspp1.pb.com/MS1ConfigurationUpload/MS1ProductConfigurationUpload.svc (Domain pbgdspp1.pb.com; IP= 199.231.44.222, 199.231.44.148 and 199.231.45.41, 199.231.45.35) ClamAV: http://clamserver.pb.com (Domain clamserver.pb.com; IP=199.231.45.165; 199.231.44.54, 199.231.33.54,199.231.35.165) Error log uploads: https://pbdlspp1.pb.com/UploadService/service.svc (Domain pbdlspp1.pb.com; IP=199.231.44.30; 199.231.45.38) Configuration web page: https://MyMS1Configuration.pb.com (Domain MyMS1Configuration.pb.com; IP=199.231.44.166) OS Updates: https://SMT.pb.com (Domain SMT.pb.com; IP=199.231.44.54; 199.231.35.165) File Updates: https://pbgdspp1.pb.com/MS1/DiaService.svc (Domain pbgdspp1.pb.com; IP=199.231.44.222) Orders (CCD): https://pbgdspp1.pb.com/MS1CCD/DiaCCDSvc.svc (Domain pbgdspp1.pb.com; IP=199.231.44.222)
Manage Accounts (Accounting)	Separate PB Server that manages Accounting including Account Creation, Reports etc.	Required	<ul style="list-style-type: none"> Accounting Web Application: https://ms1app.pb.com/ (Domain ms1app.pb.com; IP=199.231.32.67) Accounting Web Services: https://ms1app.pb.com/ms1atweb/services/ (Domain ms1app.pb.com; IP=199.231.32.47)
On Line Help	Help Website	Required	<ul style="list-style-type: none"> http://www.pitneybowes.com/view/connectplus/MailStream One Help.htm (Domain www.pb.com; IP address = 23.78.207.49)

Function	Description	Required/ Optional	Firewall Exception Rule(s)
Remote Access	"Teamviewer" Tool that allows PB Service to access machine – ONLY when customer allows it – see note below	Optional (Enabled by default)	<p>There are two options to unblock TeamViewer.</p> <ol style="list-style-type: none"> 1. General unlocking of Port 5938 TCP for outgoing connections. (recommended) Port 5938 is only used by a few programs and therefore is no security risk. This traffic should then neither be filtered nor cached. 2. Unlocking of URLs of the following formats (to any Server) GET /din.aspx?s=...&client=DynGate... GET /dout.aspx?s=...&client=DynGate... ...POST /dout.aspx?s=...&client=DynGate... <p>Regardless of which method is chosen to unblock TeamViewer, also check that no content filter or similar is blocking one of the following URLs:</p> <p>*.teamviewer.com</p> <ul style="list-style-type: none"> • *.dyngate.com
Verify Address (Address Cleaning)	Utility Website to validate addresses against USPS database	Optional (Enabled by default)	<ul style="list-style-type: none"> • http://www.pb.com/ms1av/checkaddress.jsp (Domain www.pb.com; IP=199.231.44.12)
My Account (PB.com)	Utility website to access your MyAccount on PB.com	Optional (Enabled by default)	<ul style="list-style-type: none"> • https://www.pb.com/cgi-bin/pb.dll/jsp/Login.do?lang=en&country=US&ga1=MS1 (Domain www.pb.com; IP=199.231.44.12) (Domain http://www.google.com/analytics; IP=209.85.128.000, 209.85.227.101, 209.85.227.113)

Function	Description	Required/ Optional	Firewall Exception Rule(s)
Discount & Presort Services	Utility Website to manage Discounts & Presorting	Optional (Enabled by default)	<ul style="list-style-type: none"> • http://www.pb.com/mailstream/mailling-services (Domain www.pb.com; IP=199.231.44.12)
Buy Supplies	Utility Website to order Connect+ supplies	Optional (Enabled by default)	<ul style="list-style-type: none"> • http://www.pb.com/mailstream/supplies/ms1 (Domain www.pb.com; IP=199.231.44.12)
Track a Package	Carrier independent web tracking site for packages	Optional (Enabled by default)	<ul style="list-style-type: none"> • http://pb.boxoh.com/ (Domain pb.boxoh.com; IP=72.47.250.186)
Apps & Tools	Utility Website for additional Apps and Tools	Optional (Enabled by default)	<ul style="list-style-type: none"> • http://www.pb.com/connectplus/apps/ (Domain www.pb.com; IP=199.231.44.12)
Ship a Package	Package Shipping Application	Optional (Disabled by default)	<ul style="list-style-type: none"> • http://shipapackage.us.pitneybowes.com (Domain www.pb.com; IP address = 199.231.44.12) Ship A Package is a legacy Shipping Application that is being replaced by SendPro. If this is a new installation, you do not need to open up the firewall for Ship A Package.
SendPro	Newest Package Shipping App	Optional (Disabled by default)	<ul style="list-style-type: none"> • https://sending.us.pitneybowes.com/ (Domain www.pitneybowes.com; IP address 199.231.33.6, 199.231.44.12)
SendSuite Tracking	Sendsuite Tracking Application	Optional (Disabled by default)	<ul style="list-style-type: none"> • http://sendsuitetracking/pitneybowes.com/ (Domain: www.pitneybowes.com; IP Address 199.231.33.6, 199.231.44.12)
Buy Ink Express	Allows direct access to Ink Ordering page	Required	<ul style="list-style-type: none"> • http://www.pitneybowes.us/shop/ink-and-supplies/postage-meter-ink-supplies/connect-series--1/en-us/storeus (Domain: www.pitneybowes.com; IP Address 199.231.33.6, 199.231.44.12)

Function	Description	Required/ Optional	Firewall Exception Rule(s)
Health Data Upload	Machine Health Information upload	Required	<ul style="list-style-type: none"> https://cplus-logs-fusion.pb.com/api/v1/uploads (Domain: www.pb.com ; IP Address = 199.231.33.6, 199.231.44.12)

- There are additional supporting websites that are referenced by content in the utility websites. Please contact PB's customer care group for a full list.
- TeamViewer Remote Access is used by service and sales for remote diagnostics and training. A TeamViewer session can only be initiated by someone on the customer end and therefore the system cannot be accessed without the customer's knowledge. Each session has a unique randomly generated password that is invalid when the session ends.

FAQs

Question

Answer

What OS does this device run?	SUSE Linux Sled 11
What controls are in place to protect this device against network-based malware (viruses/worms) threats?	<p>Controls include:</p> <ul style="list-style-type: none">• White list of URL's• HTTPS• Anti Virus Software• Only executes services needed to perform activities• OS distribution has been optimized and locked down
Does it have a firewall?	Yes
Who controls the firewall rules?	Pre-configured and not modifiable
How are the firewall rules configured?	Allow only the ports Http, Https and DNS
What is the security patch process?	Connect+ security patches are applied by emergency updates via PB only, and on a regular schedule through PB services.
What anti-virus controls does Connect+ use?	ClamAv is installed on every system. AV signature updates regularly updated
What is the software update process, and how often does this occur?	As required, in some cases monthly
What is the network traffic flow to and from the Connect+/SendPro system? What firewall rules need to be in place to allow the necessary communication?	<ul style="list-style-type: none">• Outgoing contact initiated (no push) utilizing HTTPS, URLs provided by PB services• Outgoing - transactional data• Incoming is both transactional data and files and Web Services
Can you identify suspicious activity affecting Connect+?	<p>Yes. An audit process exists to validate the financial integrity of the system. Error logs are available and can be uploaded to the PB data center.</p> <ul style="list-style-type: none">• Regularly scheduled physical visits from PB Service

Question

Answer

What are the access controls in place to secure Connect+?	The application access is managed by the customer using User IDs and passwords. Unique, cryptographically strong passwords for each machine restricts access to the operating system.
How do you authenticate an individual? A service?	The application access is managed by the customer using User IDs and passwords. The Connect+ Series does not provide services over a network so authentication not required.
Are there audit trails in place?	Yes. PSD transactional audits, extensive logs all financial transactions are audited by the PB infrastructure. The Connect+ Series logs all error conditions, and maintains ink usage logs, print usage logs, etc.
Is data stored on the device?	Yes. The Connect+ Series stores transactional data, graphic images, customer profiles and settings, files (rates, etc.).
What controls protect the data?	All files and data interface utilizing HTTPS. Incoming data and files are signed and verified prior to use. If consumed by the printer, it is verified on each use. If used by the application, it is verified on load.
Does the Connect+ Series allow remote administration?	Pitney Bowes will use TeamViewer to troubleshoot system problems remotely. The end user will initiate the session using a special code.

Appendix: Network Evaluation Forms

Sample Wired Questionnaire Connect+ Network Readiness

If you require assistance or need questions answered, please contact the Customer Network Support Center at 877-213-7284. Press option 1 for Technical Assistance, then press option 1 for Network Readiness Support.

Account Information

Customer Account Number

Reference ID:

Customer / Company Name:

Connectivity

Wired Questionnaire

How far is the Machine going to be from the Wired
Network Connection point? (ft)

Is Internet access through an HTTP Proxy?

- ☐ No
- ☐ Yes, using a transparent proxy (no additional settings required)
- ☐ Yes, using a configured proxy (additional settings required)

IP address or URL of the Proxy Server.

Port number of the Proxy Server.

User ID (if required).

User Password (if required).

Dynamic or Static IP

- ☐ Dynamic IP Address (DHCP)

☐ Static IP Address

IP Address to be used:

Subnet Mask:

Default Gateway IP Address to be used:

DNS Server IP address to be used:

Is MAC address filtering used?

☐ No

☐ Yes

Technical Contact Information

Technical Contact Name:

Technical Contact Title:

Technical Contact Phone:

Technical Contact Email Address:

Comments:

Please indicate best method for contacting technical contact the day of the installation.

Continue

Sample Wireless Questionnaire Connect+ Network Readiness

If you require assistance or need questions answered, please contact the Customer Network Support Center at 877-213-7284. Press option 1 for Technical Assistance, then press option 1 for Network Readiness Support.

Account Information

Customer Account Number

Reference ID:

Customer / Company Name:

Connectivity

Wireless Questionnaire

How far is the Machine going to be from the wireless access point? (ft)

Is Internet access through an HTTP Proxy?

☐ No

☐ Yes, using a transparent proxy (no additional settings required)

☐ Yes, using a configured proxy (additional settings required)

IP address or URL of the Proxy Server.

Port number of the Proxy Server.

User ID (if required).

User Password (if required).

Dynamic or Static IP

☐ Dynamic IP Address (DHCP)

☐ Static IP Address

IP Address to be used:

Subnet Mask:

Default Gateway IP Address to be used:

DNS Server IP address to be used:

Is MAC address filtering used?

☐ No

☐ Yes

What is the Wireless LAN (WLAN) 802.11
standard of your Network?

☐ Legacy

☐ a

☐ b

☐ g

☐ n

SSID / ESSID:

What is the Operating Mode of your Wireless
LAN (WLAN)?

☐ Ad-hoc (peer-to-peer without access point)

☐ Managed (network is managed by an access
point)

What Authentication method is used on your
Wireless LAN (WLAN)?

☐ No Encryption

☐ WEP (Open)

☐ WEP (Shared-key)

☐ WPA-PSK (WPA "Home")

☐ WPA-EAP (WPA "Enterprise")

☐ Other, please specify:

What Encryption method is used on your
Wireless LAN (WLAN)?

☐ WEP

☐ EAP-TTLS

☐ EAP-PEAP

☐ Other, please specify:

☐ Other, please specify:

If you are using WEP or WPA-PSK is your input
key entered as a ...

☐ Passphrase

☐ ASCII

☐ Hexadecimal

key:

Technical Contact Information

Technical Contact Name:

Technical Contact Title:

Technical Contact Phone:

Technical Contact Email Address:

Comments:

Please indicate best method for contacting technical contact the day of the installation.



Continue