

EP-BB

(Electronic Partnership Broad Band)

Security Whitepaper



Objectives and Scope

The Electronic Partnership ('EP') is an optionally enabled remote service capability developed by Fuji Xerox on your Fuji Xerox Device.

This document aims to explain the EP capability to users and administrators of the customer environment.

Specific focus is on the network specifications and data transmission.

This document describes the incremental EP activity on an EP capable device. For the device information refer to the relevant device security whitepaper available on request.

Definitions

| | |
|-------------------|---|
| EP: | Electronic Partnership, the name of the remote service capability which is developed by Fuji Xerox. |
| Device: | The Multi Function Device ('MFD') or Printers which Fuji Xerox provides. |
| EP Center: | The Fuji Xerox system that the device links to using the customer's network (Located in Japan). |
| CSE: | Customer Service Engineer. |
| Backend Systems: | Fuji Xerox infrastructure outside of the EP center. It includes contract management, billing issues, CSE dispatch, consumables delivery, quality control system, and other key functions. |
| CA: | The abbreviation of Certification Authority. An organization that publishes and manages encryption certificates. |
| Device Alert: | Any fault condition that occurs on the device and requires service. |
| Consumable Alert: | The message which a device will show, informing the customer that a replacement consumable is needed soon. |

1. Basic EP Functions

1.1 Automatic Billing Function

This function automates the submission of billing meters to reduce demand on customer to check meters.

A meter report is sent from the device automatically set at a random time during installation between 8:00 to 17:00

1.2 Consumable Alert Notification

The Consumable Alert Notification is a service to automate the replenishment of consumables. This includes toner cartridge, drum cartridge and toner waste bottle

1.3 Device Fault Alert Notification

The remote fault alert notification is provided to minimize the downtime of a device.

Device alert notification is triggered instantly, with the following exceptions: paper jam, door open, tray open and device offline. These device alerts are only reported if they remain unresolved for a predefined time (typically 30 mins)

1.4 Feature Usage & Environmental Reporting

This information reflects the usage pattern of the device. This allows the customer to fully optimise the capability and features of the device.

This report is sent from the device once a month as a total value. This report is to be made available to the customer in a customer accessible portal once completed.

2. EP interactions with the device

This chapter describes the interactions with the device related to EP functionality. The device functionality refers to the relevant device security whitepaper which is available upon request.

2.1 EP Communication Function

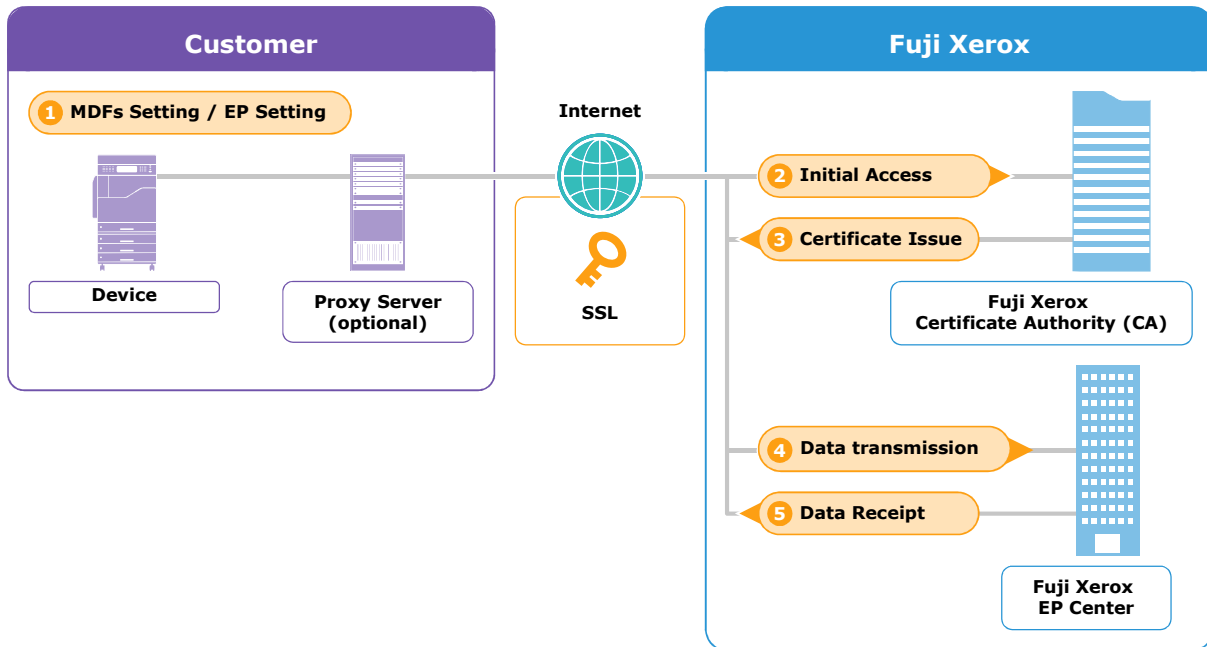
The EP communication function is incorporated as firmware on the controller board in an EP capable device. Communication with EP center is performed via the LAN port on the controller board. Image information is not included in the communications between an EP device and the EP center.

2.2 Memory and Image Data Handling

For hard disk equipped devices, all image data is stored on the hard disk. EP data is stored on the Non Volatile memory of the device.

For devices without a hard disk the non-volatile memory is used to store the address book and temporary image data used during device functions. These functions can include copy, fax, print and scan. Non-volatile memory is also used to store EP data, but in a separate logical area.

3. Network Communication



3.1 Communication Method

The EP enabled device communicates with the EP center using SOAP over an encrypted HTTPS (SSL) link to protect the data. The standard port 443 is used in HTTPS communication and the port used cannot be altered.

If the HTTPS standard port is blocked by the customer's environment, communication between the customer network and the EP center is not possible.

The EP center is addressed by URL and requires DNS resolution on the customers' site.

Communication using a proxy solution is supported with "basic authentication" method.

3.2 Communication Sequence

Communication is initiated daily by the device at a scheduled time between 8:00 to 17:00. This time is randomly allocated during installation. Communication to the device cannot be initiated by the EP center.

Only consumable and device alerts will initiate real-time transmission to EP center.

3.3 Content, Frequency and Size of Outbound Data

The volume and the frequency of data transmitted to the EP center are described in the table below. (It is accurate as of July, 2010)

| Activity | Data | From | To | Frequency | Size (Kb) | Note |
|------------------------|------------------------|--------|-----------|---------------------------------------|-----------|--|
| Activation | Installation request | Device | EP center | Only at installation and cancellation | 10.0 | |
| Billing | Billing meters | Device | EP center | Once per day | 5.0 | |
| Consumable replaced | Consumable data | Device | EP center | On demand | 5.5 | |
| Consumable required | Consumable data | Device | EP center | On demand | 5.5 | |
| Diagnostic information | Diagnostic data* | Device | EP center | Once per day | Up to 80 | |
| Diagnostic information | Diagnostic data* | Device | EP center | On demand | Up to 80 | When device alert is issued by device |
| Service request | Diagnostic data* | Device | EP center | On demand | Up to 80 | Future enhancement (currently not supported) |
| Diagnostic request | Diagnostic data* | Device | EP center | On demand | Up to 80 | When CSE issues diag command from device |
| Feature Usage* | Feature counter values | Device | EP center | Monthly | 12.0 | |
| Polling | Scheduled polling | Device | EP center | Daily | 1.0 | |
| Status change | Information | Device | EP center | On demand | 10.0 | Configuration change on the device, including firmware update and adding or removal of accessories |

* Refer to appendix

3.4 Content, Frequency and Size of Inbound Data

When a device initiates a scheduled or an on-demand communication, data is requested from EP center. This data is described below.

Note: Communication cannot be initiated from the EP center. It is only a reply to the communication initiated by the device.

| Content | Data | From | To | Initiated by | Size (Kb) | Note |
|------------------------------------|--|-----------|--------|----------------------------|-----------|--|
| Initial Parameters | Service parameter information | EP center | Device | installation | 3.5 | Define the dataset transmitted by the device |
| Parameter change | Service parameter information | EP center | Device | Any outbound communication | 3.5 | Update the dataset transmitted by the device |
| Monthly transmission day update | Monthly transmission date | EP center | Device | Any outbound communication | 1.6 | Substitute monthly transmission day due to leap year or in case of no 29, 30 or 31 date in a month |
| Scheduled delivery date consumable | Date information of scheduled delivery | EP center | Device | Irregular | 1.6 | Delivery date of consumable for display on device (Future enhancement - currently not supported) |

4. EP Center

This chapter describes the EP center and EP center management.

4.1 Information security management in the EP Center

Fuji Xerox is committed to information security. For details, please refer to the following URL on information security; <http://www.fujixerox.co.jp/company/public/security.html>.

4.2 Physical Protection of the EP Center

The EP servers are installed in the exclusive sphere, isolated physically in the data center. Entry in the data center is limited to Fuji Xerox staff only. Where entry is required by a third party, the prior permission of Fuji Xerox is required and Fuji Xerox personnel will monitor all activities conducted by the third party.

4.3 Logical Protection of the EP Center

The EP center is on a network separated from the in-company network of Fuji Xerox, and connected with the Internet through a firewall.

4.4 Data Collection in the EP Center

The data, which is sent from the device installed in a customer's environment, is stored in the EP center according to the following guidelines:

4.4.1 To provide various EP services, the system processes collected data automatically. Collected data is transmitted automatically to the backend system.

4.4.2 For device diagnostic investigation, only when required, the personnel in charge of operation or maintenance, who was given the right to access in advance, may peruse diagnostic data and its log.

4.4.3 The collected diagnostic data and the logs are saved for three months, except for "feature counter" information, and deleted after that.

4.4.4 To "report feature data and calculate a comparison to the previous year", the "feature counter information" is saved for a rolling two years, and is deleted upon expiry of that rolling period.

Fuji Xerox's privacy policy can be viewed at http://www.fujixerox.co.jp/eng/common/privacy_policy/

4.5 How we use information

We use the information sent via the Device to improve our service to you. The information may be shared among our employees, agents or other related Fuji Xerox entities and/or business partners acting on our behalf. We will not share this information with non-Fuji Xerox companies, except to the extent necessary to meet your request for services, and with the understanding that it will not be used for any purposes other than to provide services to you.

5. Our commitment to data security

Fuji Xerox strives to ensure that our IT systems are secure and that they meet industrial standards. To prevent unauthorized access, maintain data security, and ensure the proper use of information, we have put in place appropriate physical, electronic, and managerial procedures to safeguard and secure the information we collect via Electronic Partnership. We will continue to assess new technology to evaluate its ability to provide additional protection of your information.

4.2 Diagnostic Data

Diagnostic data contains two basic components.

1. HFSI counters

HFSI is the abbreviation for High Frequency Service Items. These counters indicate the usage of internal components of the device. This includes major components like fuser assemblies and image transfer belt assemblies but also small components like feed rollers in the trays and your document feeder. Most of these items have a fixed life and require periodic replacement.

Receiving HFSI counters allow us to estimate when these might need replacing and reduce the potential down time of your equipment.

2. Sub component transaction log

As a piece of paper travels through the device from the tray to the exit, it passes through different subsystems of the device. This subsystem transaction log will allow us to analyse, for example, what happens just before a paper jam.

Further detailed information on diagnostic data may be made available to a customer upon signing our standard Non Disclosure Agreement.