

EP-BB (Electronic Partnership Broad Band)

Security Whitepaper

1. Objectives and Scope	3
1.1. Definitions.....	3
2. Basic EP Functions	4
2.1. Automatic Meter Readings.....	4
2.2. Consumable Alert Notifications.....	4
2.3. Device Fault Alert Notification	4
2.4. Feature Usage & Environmental Reporting.....	4
2.5. Communication Method.....	5
2.6. EP Server URLs	5
2.7. Communication Sequence.....	5
2.8. Memory and Image Data.....	5
3. Frequency and size of Messages	6
3.1. Outbound Data	6
3.2. Frequency and Size of Inbound Data.....	7
4. Content of Outbound Data	8
4.1. Device Registration Messages.....	8
4.2. Billing Meters Messages	8
4.3. Fault Alert Messages.....	8
4.4. Feature Usage Messages.....	9
5. EP Center	10
5.1. Information security management in the EP Center	10
5.2. Physical Protection of the EP Center	10
5.3. Logical Protection of the EP Center	10
5.4. Data Collection in the EP Center	10
5.5. How we use information	10
6. Our commitment to data security	11
Appendix	12
Feature Counters.....	12
Diagnostic Data.....	2

1. Objectives and Scope

The Electronic Partnership ('EP') is an automatic notification service, developed by Fuji Xerox, that can be enabled on your compatible Fuji Xerox Devices to facilitate automatic meter readings, proactive replenishment of consumables and resolution of faults.

This document aims to explain to users and administrators how the service works and provides details about network specifications and data transmission. It describes the incremental EP activity on an EP capable device. For the information about each device, refer to the relevant device security whitepaper available on request.

1.1. 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 Centre:	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 centre. It includes contract management, billing issues, Customer Service Engineer 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.

2. Basic EP Functions

The EP communication function is incorporated as firmware on the controller board in an EP capable device. Communication with EP centre is via the LAN port on the controller board.

Data communicated via EP is limited to the following information:

- Billing Meters – Daily and Fixed meters
- Faults Alerts – Machine issues and errors
- Supplies Alerts – Toner and drum empty and exchange alerts
- Usage Counters – Counters for different feature usage of the machine

Image data, commercial data, and personal data (such as address book contents) are not included in the communications between an EP device and the EP centre.

2.1. Automatic Meter Readings

This function automates the submission of meter readings – thus avoiding the need for customers to manually check and provide meter readings.

Once enabled, the device automatically sends a meter report at a scheduled time between 9:00 and 18:00, based on the time zone set on the device. This time is randomly allocated during installation.

2.2. Consumable Alert Notifications

Consumable Alert Notifications enable the automatic replenishment of consumables; including toner cartridges, drum cartridges and toner waste bottles. When the machine detects that a consumable item is nearly due for replacement it sends an alert, which triggers the just-in-time dispatch of a replacement item.

2.3. Device Fault Alert Notification

The device can send fault alert notifications in order to minimize the downtime of a device.

Device alert notification is triggered instantly when a fault condition occurs on the device - excluding 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)

2.4. 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.

2.5. Communication Method

The EP-BB communicates securely using SOAP over an encrypted HTTPS (SSL) link. EP uses the default TCP port for SSL communication – TCP Port 443 - and this cannot be altered.

If you have a strict firewall in place you will need to implement rules to allow outbound communication on the SSL/TLS protocol.

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

The EP centre is addressed by URL and requires DNS resolution on the customer's site.

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

2.6. EP Server URLs

The specific URLs used for EP communication are listed below and may need to be added to your firewall's whitelist.

Edge server:	bbedge3-ex.fujixerox.co.jp
Edge server:	bbedge3s-ex.fujixerox.co.jp
Certificate server:	caps03.fujixerox.co.jp
Certificate server:	caps04.fujixerox.co.jp

Please note that IT knowledge specific to your environment may be required. If you do not have an IT department or are not comfortable using the steps provided, please contact the EP-BB support team for assistance.

2.7. Communication Sequence

Communication to the device cannot be initiated by the EP centre. The machine initiates communication daily at a scheduled time between 9:00 and 18:00 (based on the time zone set on the device). This time is randomly allocated during installation. These daily messages may transmit meter readings, diagnostic data, and feature usage.

The machine only initiates real-time transmission for consumable and device alerts.

2.8. Memory and Image Data

EP data, such as meter counts, error states and active alerts, is stored **separately** in the machine from document image data and user data, such as address book contents. In devices equipped with a hard disk drive, all image data and address book contents are stored on the hard disk. 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. EP data is stored in non-volatile memory of the device, but in a separate logical area.

3. Frequency and size of Messages

3.1. Outbound Data

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

3.2. Frequency and Size of Inbound Data

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

Note: Communication cannot be initiated from the EP centre. 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 centre	Device	installation	3.5	Define the dataset transmitted by the device
Parameter change	Service parameter information	EP centre	Device	Any outbound communication	3.5	Update the dataset transmitted by the device
Monthly transmission day update	Monthly transmission date	EP centre	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

4. Content of Outbound Data

4.1. Device Registration Messages

A Fuji Xerox engineer will usually initiate EP registration when installing the machine at the customer's premises. The engineer configures the machine for Internet access; entering the machine's IP Address, Subnet mask and the default gateway. Proxy details and proxy credentials will also be entered if necessary. Then the Engineer registers the device with the EP Centre; entering their FXNZ employee ID and clicking "Start"

```
1|2017-05-05T01:00:15+09:00
2|ProductCode|SerialNumber|RegistrationDate|Requestor|BoxProductCode|BoxSerialNumber
3|TM200076|730652|2017-05-04T14:01:47+09:00|FXNZ||
4|2017-05-05T01:00:15+09:00|1
```

Figure 1 - sample registration message

4.2. Billing Meters Messages

The machine polls at the same time each day to send billing meter readings.

```
1|2017-05-08T01:15:09+09:00
2|ProductCode|SerialNumber|OpcoID|IssueDate|AcceptDate|Meter1|Meter2|Meter3|Meter4|Meter5
3|TC101180|620237|FXNZ|2017-05-07T15:50:01+09:00|2017-05-07T15:49:55+09:00|4|41|2|45|0
4|2017-05-08T01:15:09+09:00|1
```

Figure 2 – sample billing meters message

4.3. Fault Alert Messages

Fault alerts are sent in real-time whenever the machine detects a fault condition.

```
1|2017-05-08T12:56:07+09:00
2|ProductCode|SerialNumber|OpcoID|IssueDate|AcceptDate|AlertLevel|ChainLink
3|TC101180|620237|FXNZ|2017-05-08T12:55:22+09:00|2017-05-08T12:55:17+09:00|3|005-122
4|2017-05-08T12:56:07+09:00|1
```

Figure 3 – sample fault alert

4.4. Feature Usage Messages

This message, sent weekly, contains counters for usage of the machine's features.

```
FAXUsageCounter.PrintDuplexSheets|ScanUsageCounter.Impressions|TotalUsageCounter.Duplex  
Sheets|  
TotalUsageCounter.SendImpressions|TotalUsageCounter.Sheets|PaperSizeUsageCounter.JIS_B4  
|  
PaperSizeUsageCounter.A6|PaperSizeUsageCounter.LEDGER|PaperSizeUsageCounter.8KAI|  
PaperSizeUsageCounter.13X18|PaperSizeUsageCounter.13X19|PaperSizeUsageCounter.DT_SPECIA  
LA3|  
PaperSizeUsageCounter.126X192|PaperSizeUsageCounter.DOUBLE_HAGAKI|PaperSizeUsageCounter  
.60X90|  
PaperSizeUsageCounter.SRA3|PaperSizeUsageCounter.A5|PaperSizeUsageCounter.ISO_C4|  
PaperSizeUsageCounter.ISO_DESIGNATED_LONG|PaperSizeUsageCounter.TYOUKEI_3|  
PaperSizeUsageCounter.OTHER|PaperSizeUsageCounter.LETTER|PaperSizeUsageCounter.JIS_B5|  
StoredDocumentUsageCounter.UnprintedDeletedImpressionsFAX0|  
StoredDocumentUsageCounter.UnprintedDeletedImpressionsFAX1|  
StoredDocumentUsageCounter.UnprintedDeletedImpressionsFAX2|  
StoredDocumentUsageCounter.UnprintedDeletedImpressionsFAX3|  
StoredDocumentUsageCounter.UnprintedDeletedImpressionsFAX4|  
StoredDocumentUsageCounter.UnprintedDeletedImpressionsFAX5|  
UptimeUsageCounter.ControllerStandbyTime|UptimeUsageCounter.IOTStandbyTime|  
UptimeUsageCounter.IOTLowPowerTime|UptimeUsageCounter.IITStandbyTime|  
PaperSizeUsageCounter.HAGAKI|PaperSizeUsageCounter.FOLIO|PaperSizeUsageCounter.LEGAL|  
PaperSizeUsageCounter.12X18|PaperSizeUsageCounter.JIS_B6|PaperSizeUsageCounter.EXECUTIV  
E|  
PaperSizeUsageCounter.LETTERCOVER|PaperSizeUsageCounter.SPANISH|  
PaperSizeUsageCounter.TYOUKEI_4|PaperTrayUsageCounter.Tray9PrintedSheets|  
PaperTrayUsageCounter.Tray10PrintedSheets|PaperTrayUsageCounter.Tray11PrintedSheets|  
PaperTrayUsageCounter.Tray9PrintedImpressions|PaperTrayUsageCounter.Tray10PrintedImpres  
sions|  
PaperTrayUsageCounter.Tray11PrintedImpressions|PaperSizeUsageCounter.SPECIALA4|  
FinishingUsageCounter.FoldZ|FinishingUsageCounter.FoldLetterZ|  
FinishingUsageCounter.FoldLetterC|FinishingUsageCounter.FoldCenter|  
FinishingUsageCounter.Punch2|FinishingUsageCounter.Punch3|
```

Figure 4 – sample feature usage data

5. EP Centre

This chapter describes the EP centre and EP centre management.

EP-enabled devices communicate with the Fuji Xerox EP centre via the customer's network and the internet.

5.1. Information security management in the EP Centre

Fuji Xerox is committed to information security. For details, please refer to the following URL on information security;

<http://www.fujixerox.com/eng/company/sr/2016/corporation/organization/disclosure.html>

5.2. Physical Protection of the EP Centre

The EP servers are installed in an exclusive sphere, isolated physically in the data centre. Entry in the data centre 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.

5.3. Logical Protection of the EP Centre

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

5.4. 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 centre according to the following guidelines:

- 1 To provide various EP services, the system processes collected data automatically. Collected data is transmitted automatically to the backend system.
- 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.
- 3 Apart from 'Feature Counter' information, the collected diagnostic data and the logs are saved for three months and deleted after that.
- 4 To enable reporting of 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 <https://www.fujixerox.co.nz/Privacy-Policy>

5.5. How we use information

Fuji Xerox 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.

6. Our commitment to data security

Fuji Xerox strives to ensure that our IT systems are secure and that they meet industry 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.

7. Support documentation

You can download a series of how to documents and troubleshooting guides about EP from the following website:

http://onlinesupport.fujixerox.com/processDriverForm.do?ctry_code=NZ&lang_code=en&d_lang=en&corp_pid=EP-BB&rts=null&model=Electronic+Partnership+Broadband&type_id=5&oslist=-1&lang_list=en

Diagnostic Data

Diagnostic data consists two basic components; HFSI counters and sub-component transaction logs.

HFSI counters

HFSI is the abbreviation for High Frequency Service Items. These counters indicate the usage of internal components of the device, such as fuser assemblies and image transfer belt assemblies, as well as small components, such as 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.

Sub-component transaction logs

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 allows 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.



For more information or detailed product specifications,

call or visit us at:

www.fujixerox.co.nz

Fuji Xerox New Zealand Ltd

Tel. 0800 4 XEROX (0800 493 769), then for Technical Support - Press '1'

contact.centre@nzl.fujixerox.com