

**Data Centre Operations Service: Service Description****FUJITSU RESTRICTED (COMMERCIAL IN CONFIDENCE)**

Document Title: Data Centre Operations Service: Service Description

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Document Author & Dept: Phil Boardman Service Architect, Fujitsu Services Post Office Account

Document Editor (this edition) Pete Jobson, Matthew Lenton, Fujitsu Services Post Office Account

Document Owner Steve Bansal, Senior Service Delivery Manager, Fujitsu Services Post Office Account

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Approval Authorities:

Name	Role	See Dimensions for record
Steve Bansal	Fujitsu Services Post Office Account Senior Service Delivery Manager	
Dionne Harvey	Post Office Limited Head of IT Contract Management	



0 Document Control

0.1 Table of Contents

0	<u>DOCUMENT CONTROL</u>	2
0.1	<u>Table of Contents</u>	2
0.2	<u>Document History</u>	4
0.3	<u>Review Details</u>	8
0.4	<u>Associated Documents (Internal & External)</u>	9
0.5	<u>Abbreviations</u>	10
0.6	<u>Glossary</u>	12
0.7	<u>Changes Expected</u>	12
0.8	<u>Accuracy</u>	12
0.9	<u>Information Classification</u>	12
1	<u>SERVICE SUMMARY</u>	13
2	<u>HNG-X</u>	14
2.1	<u>Service Definition</u>	14
2.1.1	Key activities	14
2.1.2	Capacity Management	15
2.1.3	Operational Change Proposals	15
2.1.4	Service Management	15
2.2	<u>Service Availability</u>	16
2.3	<u>Service Levels and Remedies</u>	16
2.3.1	General Principles	16
2.3.2	Service Level Relief	17
2.3.3	Rectification Plan	18
2.3.4	Service Levels for which Liquidated Damages Apply	18
2.3.5	Service Levels for which Liquidated Damages Do Not Apply	21
2.3.6	Operational Level Targets	24
2.3.7	Performance Metrics	24
2.3.8	Design Targets	25
2.4	<u>Service Limits and Volumetrics</u>	25
2.5	<u>Assets and Licences</u>	25
2.5.1	Assets	25
2.5.2	Licences	25
2.6	<u>Charges</u>	25
2.6.1	Operational Fixed Charge	25
2.6.2	Operational Variable Charge	26
2.6.3	Additional Operational Variable Charge	26
2.7	<u>Dependencies and Interfaces with Other Operational Services</u>	26
2.7.1	Not used	26
2.7.2	The Service Management Service	26
2.7.3	The Systems Management Service	26
2.7.4	The Central Network Service	26
2.7.5	Removed by CCN1623b	26
2.7.6	The Management Information Service	26
2.7.7	The Reference Data Management Service	26
2.7.8	The Operational Business Change (Branch Change) Service	27
2.7.9	The Third Line Support Service	27
2.7.10	The Security Management Service	27



Data Centre Operations Service: Service Description

FUJITSU RESTRICTED (COMMERCIAL IN CONFIDENCE)



2.8	Post Office Dependencies and Responsibilities	27
2.9	Business Continuity	27
2.9.1	Failover from live to Disaster Recovery Data Centre	27
2.9.2	Frequency	28
2.10	Documentation Set Supporting the Service	29
3	ANNEX A: PODG CLIENT FILE RE-SEND SERVICE	29
3.1	Summary	29
3.2	Service Definition	29
3.2.1	Service Components	29
3.2.2	Request for file re-send	30
3.2.3	File re-send and confirmation to Post Office	30
3.2.4	Liaison with Client	30
3.2.5	Service Availability	30
3.3	Service Levels and Targets	30
3.3.1	Operational Service Levels	30
3.4	Service Limits	30
3.5	Charges	31
3.6	Post Office Dependencies and Responsibilities	31
3.7	Documentation Set Supporting the Service	31
4	ANNEX B: NOT USED	31
5	ANNEX C: POST OFFICE DATA GATEWAY SERVICE	31
5.1	Summary	31
5.2	Service Definition	32
5.2.1	Platform Hosting	32
5.2.2	Network	33
5.2.3	File Transfer Services	33
5.2.4	Service Management	33
5.2.5	Incident Management	34
5.2.6	Service Availability	34
5.2.7	Resilience	34
5.2.8	Business Continuity	34
5.2.9	Service Levels or Targets	35
5.2.10	Capacity	35
5.2.11	Changes	35
5.2.12	Charges	36
6	ANNEX D: COLLECT AND RETURN WEB SERVICE	36
6.1	Summary	36
6.2	Requirements	36
6.2.1	Service Level Requirements (warranty)	37
6.2.2	Service Levels, Key Performance Indicators (warranty)	38
6.2.3	Key Performance Indicators	38
6.2.4	Measurement Periods	38



0.2 Document History

Version No.	Date	Summary of Changes and Reason for Issue	Associated Change - CP/PEAK/PPRR Reference
1.0	31/08/06	Agreed	
1.1	12/12/07	Changes to sections 5.1.2.1.3, 2.9.1.1 and 2.3.4.6.1	
1.2	14/10/2008	Review as per CCN, see section 0.5 for changes	
1.3	26/03/2009	Changes Applied to reviewed comments from Dave Chapman, Torstein Godeseth, Dave Johns, Dave Cooke Is not used. Previous details of have now become Table 4 Table 26 No longer Valid	
1.4	27/03/2009	Table 15a added = to SLT	
2.0	30/07/2009	Approval	
2.1	29/09/2009	Review Change Section 3.2.1 & 3.9.1	
3.0	08/10/2009	Approval	
3.1	10/08/2010	Review prior to POLSAP	POLSAP
3.2	25/10/2010	Review Post POLSAP	POLSAP
3.3	14/06/2011	Major Update of Document now relevant for HNG-X only with removal of sections 3 (Hydra) and those SLA's listed to be removed after HNG-X completed. These were listed under section 3.3.2.1 General Principles v3.2 which are now removed from this updated document : a. section 2.3.4.4: inbound LFS; b. section 2.3.4.5: inbound Transaction Correction Records; c. section 2.3.5.3: APS to APS Clients d. section 2.3.5.7: inbound LFS; and e. section 2.3.5.8: inbound Transaction Correction Records. Updated section 2.9.1.1 DR failover schedule to reflect the current business requirements.	POLSAP; R1 post go live changes
3.4	07/07/2011	Updated following comments received from Fujitsu reviewers *	POLSAP
3.5	23/03/12	Changes to correct inaccuracies and baseline to Release 1 of HNG-X.	POLSAP
3.6	27/03/2012	Removal of annotations and amend references to SAPADS to POLSAP	POLSAP
3.7	09/05/12	Updated following comments received from Fujitsu reviewers	
3.8	22/08/12	Updated following comments received from Post Office reviewers	
3.9	21/09/12	Changes to introduce PODG and Credence DR	CP0704 (PODG Client Migration)
3.10	30/10/2012	Updated following comments received from Post Office Ltd and Fujitsu reviewers	CP0704 (PODG Client Migration)
3.11	31/10/2012	Updated following review with internal colleagues	CP0704 (PODG



Data Centre Operations Service: Service Description

FUJITSU RESTRICTED (COMMERCIAL IN CONFIDENCE)



Version No.	Date	Summary of Changes and Reason for Issue	Associated Change - CP/PEAK/PPRR Reference
		Section 2.3.4.1 Table 1: The LD figure in the Liquidated Damages Formula updated in-line with Schedule B4.4 Annex 2 Section 2.1.4 of Version 8.0 of the Agreement – 1.04p updated to 1.46p	Client Migration)
3.12	27/12/2012	Updated following review with Internal colleagues, prior to submission for review with all parties	CP0704 (PODG Client Migration)
3.13	23/01/2013	Updated following comments	CP0704 (PODG Client Migration)
3.14	20/02/2013	Updated following comments	CP0704 (PODG Client Migration)
3.15	27/02/2013	Updated to reflect changes as per comments	CP0704 (PODG Client Migration)
3.16	13/03/2013	Updated to reflect changes as per comments	CP0704 (PODG Client Migration)
3.17	18/04/2013	Updated to reflect POL comments	CP0704 (PODG Client Migration)
3.18	30/04/2013	Following group review – final changes made prior to v4.0 being submitted for approval	CP0704 (PODG Client Migration)
3.19	26/09/2013	Updates to 2.3.5.8 Basket Settlement Transactions 2.7.10.1 Obligations PCI. Removal of 2.10 Documentation Set. Addition of 6 Annex D Collect and Return.	CCN1332A (PCI) CCN1342 (Collect and Return)
3.20	30/09/2013	Amendments to Annex D to reflect service design. Revised Table 19 Section 2.10.	CCN 1342A (Collect and Return)
3.21	13/12/2013	Reference to SVM/SDM/SSD/0004 replaced with COM/MGT/REP/0001 Transfer Asset Register	
4.0	13/12/2013	Approval version	
4.1	11/01/2014	Amendment to section 2.3.5.3 SLT measure	CCN 1406
5.0	04/02/2014	Approval version	
5.1	17/04/2014	Updated to remove reference to POLSAP: content at 2.3.5.6, 2.3.4.9, 2.3.7.3 and Annex B removed. Refer to specific POLSAP Service Descriptions in section 0.4.	TSS CCN1400
5.2	27/05/2014	Added document references	TSS CCN1400
5.3	03-Jun-2014	Removed section 1.1c); 1.10; 2.10 references to POLSAP.	TSS CCN1400
5.4	10-Jun-2014	All changes from v5.0 shown tracked for purpose of POL review	TSS CCN1400
6.0	29-Nov-2016	Approval version	
6.1	02-Mar-2017	Changes to section 2.3.4.3.1 Table 3 reflecting CCN1614a 'Termination of the Branch Network Service and CMT Service to Branches using the VSAT BB communications method' sign-off. Changes to Annex C Sections 5.2.4, 5.2.10 reflecting CCN1502 Contractual Volume Increase for PA/PER/033 - Post Office Data Gateway (PODG)	CCN1614a CCN1502a



Data Centre Operations Service: Service Description

FUJITSU RESTRICTED (COMMERCIAL IN CONFIDENCE)



Version No.	Date	Summary of Changes and Reason for Issue	Associated Change - CP/PEAK/PPRR Reference
		Added document references for Collect and Return to section 0.4, omitted when Annex D was added at version 3.19. Deleted obsolete references.	CCN 1342A
6.2	10-Oct-2017	Formatting corrections following review. Removed references to Horizon Service Desk Service at section 2.7.1 Conformed to CCN1618 with addition of Annex E, Test Rig Manager Role Description, contents of which were approved by email from Dionne Harvey on 22-Nov-2017. Conformed to CCN1622a, section 2.3.4.4.1. Removed reference to SVM/SDM/SD/0002, section 0.4	CCN1409a CCN1618 CCN1622a CCN1616b
6.3	13-Jul-2018	Rows relating to Outbound TPS to POLSAP Software SLTS deleted, section 2.3.5.3, Table 6. Contents of Section 2.3.7.1 and Table 14 deleted.	CCN1634a
6.4	15-Jan-2019	Removed references to Credence Removed reference to POLSAP at Table 18 (change omitted from first conformance to CCN1400, as detailed in this table).	CCN1602a CCN1400
6.5	23-Apr-2020	Remove Annex E (CCN1650c) Add BDAS Server to section 2.9.1.1 (CCN1658c) Perform updates in accordance to CCN1655a	CCN1650 CCN1658 CCN1655
6.6	29-Jun-2020	Revisions following review by Steve Bansal: Removed POLSAP definitions from section 0.5 2.3.4.4.1 Revised scope and end date. 2.1.1.2.1 Reference to Service Desk replaced by Service Management Service. 2.1.1.2.1 Amended section heading from Branch to Network Incident Management and deleted reference to Branch Infrastructure as no longer part of HNG-X Service Infrastructure after 01-Apr-2015.	CCN1655 CCN1661a CCN1409 CCN1423
6.7	23-Jun-2021	2.3.4.4.1 Table 3 amended to exclude transactions from branches where the network connection is provided by the Network Tower Contractor. 2.3.5.8 Table 12 amended, as above. 2.3.5.10 New section added "Data Centre Transaction Times: Banking and Basket Settlement Transactions"	CCN1623b Part 1
		0.3 AS/IFS/001 and SVM/SDM/SD/0011 deleted. 2.3.5.2 Table 5 amended in respect of expiry of Branch Network Service (BNS). 2.7.5 Removed in respect of expiry of BNS.	CCN1623b Part 2
		2.3.4.4(a) and Table 3 amended post transition of BNS to Network Tower Provider. 2.3.5.8 Table 12 amended, as above. 2.3.5.10 Deleted in respect of expiry of BNS.	CCN1623b Part 3
		2.3.4.2 Table 1 amended value in liquidated damages formula (Note: 2.3.4.3 Table 2 not updated as per CCN as already	CCN1648b



Data Centre Operations Service: Service Description

FUJITSU RESTRICTED (COMMERCIAL IN CONFIDENCE)



Version No.	Date	Summary of Changes and Reason for Issue	Associated Change - CP/PEAK/PPRR Reference
		deleted by CCN1655a) 2.9.1.1 Table 18 removed reference to MoneyGram. 2.10 Table 19 removed reference to CS/OLA/062	
		2.3.4.4.1 Amended to extend operation of HNG-A Gaps, SYSMAN3 and Residual Release 17 Component and Infrastructure to 31-Mar-2022 (follows on from previous extension in CCN1652c).	CCN1673
		1.10 New section added in respect of initial changes to support migration of HNG-X from Belfast Data Centres to Post Office Cloud. 2.3.4.4 Table 3 amended in respect of any part of the HNG-X system that has migrated to the Post Office Cloud. 2.3.5.2 Table 5, note added to exclude elements of HNG-X system that have migrated to the Post Office Cloud. 2.3.5.7 Table 11, note added to exclude TESQA when it has migrated to Post Office Cloud. 2.3.5.8 Table 12 amended in respect of any part of the HNG-X system that has migrated to the Post Office Cloud. 2.7.10 amended to specify it applies to access to the HNG-X System only. 2.9.1.1 amended in respect of Post Office responsibility for failover testing for sub-services hosted on Post Office cloud. 2.9.1.2 amended to specify extent of Data Centre failover tests in relation to Post Office Cloud.	CCN1678
6.8	12-Oct-2021	Amended 2.3.4.4; Table 3; 2.3.5.2; Table 5; 2.9.1.1 to introduce references to Payment and Banking Service.	CCN1672a
		Table 3 between PBS3 and PBS5, added statement to exclude any HNG-X banking transactions involving systems migrated to Post Office Cloud, not specified by, but in keeping with CCN1678.	CCN1678
		2.9.1.1 c) BDAS downtime wording clarified over that given in CCN1658c, as per email Phil Boardman to Dionne Harvey 29-Jul-2021.	CCN1658c
7.0	23-Jun-2022	Approval version	



Data Centre Operations Service: Service Description

FUJITSU RESTRICTED (COMMERCIAL IN CONFIDENCE)



0.3 Review Details

Review Comments by :	
Review Comments to :	Matthew.Lenton@GRO PostOfficeAccountDocumentManagement@GRO
Mandatory Review	
Role	Name
Post Office Limited	
Post Office: Head of IT Contract Management	Dionne Harvey@GRO GRO
Post Office: HM Horizon IT Chief Architect	Dan Addy@GRO GRO
Fujitsu Services Post Office Account	
Senior Commercial Manager	Helen Venters; Post Office Account Commercial Mailbox
Service Architecture Manager	Alex Kemp
Senior Service Delivery Manager	Steve Bansal
Service Architect	Phil Boardman
Optional Review	
Role	Name
Fujitsu Services Post Office Account	
POA CTO	Simon Wilson
POA Chief Architect	Torstein Godeseth
Security Architect	Dave Haywood
Service Delivery SSC & Capacity Manager	Adam Woodley; SSC Duty Manager
Customer Requirements Business Manager	Steve Evans
Customer Solutions Architect	Pete Jobson
Fujitsu Data Centre Service Delivery	Andrew Hemingway
Operational Change/ Release Management	Matt Swain
HNG-X Network Architect	Ravi Saini
Service Delivery Business Continuity Manager	Sidharth Kumar
IRE11/19 Data Centre Manager	John Hill
IRE11 Operations Manager	Jill Smyth
IRE11 Unix2 Team	Andrew Gibson
Post Office Limited	
Post Office: CISO for Retail and Controls	Dean Bessell@GRO GRO
Post Office: IT Document Specialist	Steven Vouthas@GRO GRO
Issued for Information – Please restrict this distribution list to a minimum	
Position/Role	Name

(*) = Reviewers that returned comments
 (#) = Reviewers that returned nil comments



0.4 Associated Documents (Internal & External)

Reference	Version	Date	Title	Source
AP/IFS/063			Horizon APOP Authorisation Service Application Interface Specification	Fujitsu Services
AP/IFS/063			HORIZON APOP Authorisation Service Application Interface Specification	Fujitsu Services
AP/IFS/065			APOP Host System Reporting to Client Application Interface Specification	Fujitsu Services
AP/MAN/004			APOP Authorisation Service Reference Manual	Fujitsu Services
AS/IFS/001			HORIZON TO Post Office Feed FOR Track and Trace	Fujitsu Services
BP/SPE/046			APOP Definition	Fujitsu Services
COM/MGT/REP/0001			Asset Transfer Register	Fujitsu Services
CS/PRD/058			Fujitsu Services/Post Office Interface Agreement for Operational Business Change – Product	Fujitsu Services
DES/APP/AIS/1783			Fujitsu to Post Office PODG Log File Application Interface Specification	Fujitsu Services
DES/APP/DPR/2067			Design Proposal for Local Collect and Return	Fujitsu Services
DES/APP/HLD/2141			HNG-X Collect and Return HLD	Fujitsu Services
DES/NET/HLD/2084			HNG-X Reverse Proxy Server Network HLD	Fujitsu Services
DES/NET/HLD/2252			HNG-X Collect and Return Reverse Proxy Server HLD	Fujitsu Services
DES/PPS/HLD/2205			All Platform Service List	Fujitsu Services
DES/PPS/PPD/2135			Physical Platform Design BFCs Collect and Returns	Fujitsu Services
DEV/INF/LLD/2087			HNG-X Collect and Return Network LLD	Fujitsu Services
PA/PER/033			HNG-X Capacity Management and Business Volumes	Fujitsu Services
REQ/CUS/CDE/1397			Post Office Data Gateway (PODG) Service Framework Requirements Catalogue	Fujitsu Services
REQ/INF/TIS/1982			Post Office Data Gateway to <Client> Technical Interface Specification for SFTP Connections	Fujitsu Services
REQ/INF/TIS/1988			Post Office Data Gateway to <Client> Technical Interface Specification for FTP Connections	Fujitsu Services
REQ/INF/TIS/1989			Post Office Data Gateway to <Client> Technical Interface Specification for Connect:Direct Connections	Fujitsu Services
REQ/INF/TIS/1991			Post Office Data Gateway to <Client> Technical Interface Specification for FTPS Connections	Fujitsu Services
SVM/SDM/OLA/1797			Operational Level Agreement between Fujitsu Services Ltd Post Office Account	Fujitsu Services



Data Centre Operations Service: Service Description

FUJITSU RESTRICTED (COMMERCIAL IN CONFIDENCE)



Reference	Version	Date	Title	Source
			and Post Office Limited for the Post Office Data Gateway'	
SVM/SDM/PLA/0002			HNG-X Services Business Continuity Plan	Fujitsu Services
SVM/SDM/PRO/0001			POA Operations Major Incident Management Process	Fujitsu Services
SVM/SDM/PRO/0007			AP Client File Re-Send – Joint Working Document	Fujitsu Services
SVM/SDM/PRO/0018			POA Operations Incident Management Process	Fujitsu Services
SVM/SDM/PRO/0025			POA Customer Service Problem Management Procedure	Fujitsu Services
SVM/SDM/PRO/1520			Release Management Strategy	Fujitsu Services
SVM/SDM/PRO/1871			PODG Client Connection Procedure	Fujitsu Services
SVM/SDM/SD/0004			Horizon Online 3rd Line Application Support Service: Service Description	Fujitsu Services
SVM/SDM/SD/0006			Systems Management Service: Service Description	Fujitsu Services
SVM/SDM/SD/0007			Service Management Service: Service Description	Fujitsu Services
SVM/SDM/SD/0012			Central Network Service: Service Description	Fujitsu Services
SVM/SDM/SD/0013			Reference Data Management Service: Service Description	Fujitsu Services
SVM/SDM/SD/0014			Operational Business Change (Branch Change) Service: Service Description	Fujitsu Services
SVM/SDM/SD/0016			Management Information Service: Service Description	Fujitsu Services
SVM/SDM/SD/0017			Security Management Service: Service Description	Fujitsu Services
SVM/SDM/SIP/0001			HNG-X Business Continuity Framework	Fujitsu Services

Unless a specific version is referred to above, reference should be made to the current approved versions of the documents.

0.5 Abbreviations

Abbreviation	Definition
AP Client Trading Day	The 24 hour period from 19.00 of a day to 18.59 of the following day and includes all Bank Holidays and weekends
AP Client Trading Window	Each individual AP Client will require that the transaction data for each AP Client Trading Day or a combination of more than one consecutive AP Client Trading Days (specified as certain days of the week) will be captured and delivered to the AP Client. The period which this data covers, be it one AP Client Trading Day or more than one consecutive AP Client Trading Days is the AP Client Trading Window.
AP Client Transaction File	The data file containing the AP transactions recorded or logged at the Data Centre for an AP Client Trading Window
AP Client Delivery Day	The calendar day in which the AP Client Transaction File is delivered. This will be the calendar day following the calendar day in which the AP Client Trading Window ends.



Data Centre Operations Service: Service Description

FUJITSU RESTRICTED (COMMERCIAL IN CONFIDENCE)



Abbreviation	Definition
APOP	Automated Payments Out Pay
APS	Automated Payments System
ARL	Additional Remedy Level
C0	A confirmation message written by the Banking Counter Application
CAPO	Card Account Post Office
CCD	Contract Controlled Document
CFS	Post Office Ltd. Core Financials System
CTS	Control Total Summary
CWC	Cash Web Community software, Post Office Ltd. cash management solution
DCS	Debit Card Service
DRS	Data Reconciliation Service
DVLA	Department of Vehicle Licence Authority
DAY A	Schedule B4.4: " Day A " means the day of the specified triggering event (such as the date of a Transaction) For the purpose of this document Day A refers to the calendar day of the specified triggering event (such as the date of a Transaction);
DAY B	Schedule B4.4: " Day B " means the day following Day A For the purpose of this document Day B refers to the calendar day following Day A
ETU	E Top Up (EPAY Service)
HR SAP	Human Resources SAP System
ITIL	Information Technology Infrastructure Library
LDT	Liquidated Damage Target
LFS	Logistical Feeder Systems
LREC	Vocalink Reconciliation File
MDM	Master Data Management
NB	Network Banking
NDA	Non Disclosure Agreement
PAF	Postal Address File
PAN	Primary Account Number
PLD	The Development environment where customizing and development can be performed by Fujitsu
PLE	The Test/Training 'isolated' environment for Post Office to test end-to-end functionality of the SAP solution. Authorisation for import of change into this system and all of its clients is the responsibility of Post Office following recommendation by Fujitsu Services
PLP	The stand-alone production environment for Post Office End-users. Authorisation for import of change into this system and all of its clients is the responsibility of Post Office following recommendation by Fujitsu Services
PLQ	The QA 'isolated' environment for Fujitsu to test customizing and development changes for integration and quality assurance. Authorisation for import of change into this system and all of its clients is the responsibility of Fujitsu
PM	Performance Measure



Data Centre Operations Service: Service Description

FUJITSU RESTRICTED (COMMERCIAL IN CONFIDENCE)



Abbreviation	Definition
PODG	Post Office Data Gateway
PODGe	External PODG server – the client-facing PODG server
PODGi	Internal PODG server – the HNG-X data centre facing PODG server
Point of Use	Point of use is defined as the share, which is used by the BRDB. This specifically excludes time to transit through PODG
POA	Post Office Account (Fujitsu)
RPI	Retail Price Index
SLT	Service Level Target
TES	Transaction Enquiry Service
TPS	Transaction Processing System
UPS	Uninterrupted Power Supply

0.6 Glossary

Term	Definition

0.7 Changes Expected

Changes
CCN1709, CCN1710, CCN1714 will be applied to this document following approval of v7.0.

0.8 Accuracy

Not applicable.

0.9 Information Classification

The author has assessed the information in this document for risk of disclosure and has assigned an information classification of FUJITSU RESTRICTED (COMMERCIAL IN CONFIDENCE).



1 Service Summary

- 1.1 The Data Centre Operations Service consists of two (2) component services:
- a) the Data Centre Operations Service – this service is described in sections 2 and 3 of this document;
 - b) the AP Client File Re-Send Service – this service component of the Data Centre Operations Service is described in Annex A: PODG Client File Re-Send Service of this document;
- 1.2 The Data Centre Operations Service is responsible for the provision of all Data Centre operations, which includes, for example; all the agents, servers, and databases used to manage and support the Branch Infrastructure and HNG-X Central Infrastructure used to deliver the Business Capabilities and Support Facilities irrespective of technology platform or geographical location.
- 1.3 The primary elements of the Data Centre Operations Service cover the day to day management and operational control of the Data Centre environments located in the live Data Centre and the Disaster Recovery (DR) Data Centre applying ITIL best practice within these environments.
- 1.4 Operational staff will be appropriately trained to carry out the Data Centre Operations Service process, which includes monitoring capability within each of the respective Data Centres to an agreed level.
- 1.5 The Data Centre Operations Service provides on-site operational support in order to identify / minimise interruptions to the HNG-X Services provided by Fujitsu Services.
- 1.6 The management of the Data Centres shall be aligned with the operational requirements within the Branch Infrastructure.
- 1.7 Changes to the Data Centre environments shall be made without impacting the live service and in accordance with Fujitsu Services' corporate working practices and operational standards. No changes will be carried out within the Data Centre without an approved change record.
- 1.8 The Data Centre Operations Service shall be fully compliant with the security management standards and policies and follow approved procedures as set out within the Contract Controlled Document (CCD) entitled: "Security Management Service, Service Description" (SVM/SDM/SD/0017).
- 1.9 The live Data Centre will run in an active / DR mode with the DR Data Centre being used for testing. The live Data Centre (including the communications in and out of the building) is, in its own right, fully resilient. There are single high capacity network links in each data centre. Resilience is achieved by triangulation, for example, of the single network link into the live Data Centre fails then traffic will use the single high capacity link into the DR Data Centre and traverse the inter campus link. Also many network components are active / active across the data centres. Business Continuity testing is completed during the week (Monday to Friday) for a maximum of two (2) weeks per year, during which operational testing will not take place at the DR Data Centre.
- 1.10 Whilst this Data Centre Operations Service shall not apply to operations and support of the Post Office Cloud, the following elements of second line application support described in this CCD shall continue to be provided to those elements of the HNG-X Application migrated to Post Office Cloud:
- a) Incident Management as documented in paragraph 2.1.1.2 below for the operations of the HNG-X System hosted on the Post Office Cloud only. This shall not apply to incidents relating to the functioning of the infrastructure used to deliver the Post Office Cloud.



- b) Creation of relevant Operational Change Proposals, as documented in paragraph 2.1.3 below, and impact assessments of relevant Operational Change Proposals, created by Post Office in accordance with paragraph 2.1.3 below.
- c) Continued delivery of the Service Levels as documented in paragraph 2.3, below.
- d) Support for the relevant Dependencies and Interfaces with Other Operational Services as documented within paragraph 2.7, below.
- e) Fujitsu Services shall support Post Office's planning and testing of resilience, disaster recovery and business continuity activities performed on Post Office Cloud. Fujitsu Services will define and document the HNG-X Application specific aspects of technical recovery plans for individual sub-systems and for dependencies for recovery sequences between sub-systems of the HNG-X Application. They will also communicate to Post Office the recovery sequences and any changes in such plans or dependencies for recovery sequences identified as a result of changes to the HNG-X Application.

2 HNG-X

2.1 Service Definition

2.1.1 Key activities

2.1.1.1 Access Control

The Data Centre Operations Service will conform to the controls and procedures around access to the Data Centre environments as defined in the CCD entitled: "*Security Management Service, Service Description*" (SVM/SDM/SD/0017).

2.1.1.2 Incident Management

- Fujitsu Services will be responsible for informing Post Office of any service affecting Incidents.
- The Data Centre Operations Service will conform to the Fujitsu Services Post Office Account (POA) Incident management process as defined in the Working Document entitled: "*POA Operations Incident Management Process*" (SVM/SDM/PRO/0018) for the following types of Incident management:

2.1.1.2.1 Network Incident Management

The Data Centre Operations Service will assist the Service Management Service and the Central Network Service in resolving HNG-X Central Infrastructure network faults with Fujitsu Services network communications suppliers.

2.1.1.2.2 Major Incident Management

Major Incidents will be managed in accordance with the Working Document entitled: "*POA Major Incident Process*" (SVM/SDM/PRO/0001).

2.1.1.3 Environmental Maintenance

- (a) The Data Centre Operations Service will implement a maintenance plan, which shall be shared with Post Office on request, for the calendar year covering testing of the following environmental elements:
 - power generator;
 - power UPS;
 - power distribution unit(s);

**Data Centre Operations Service: Service Description****FUJITSU RESTRICTED (COMMERCIAL IN CONFIDENCE)**

- power switch;
 - air conditioning units;
 - fire detection & suppression units;
 - physical security systems & processes;
 - lighting;
 - telephony and fax;
 - tape libraries;
 - secure storage area;
 - health and safety compliance; and
 - Cleanliness.
- (b) Fujitsu Services shall implement the maintenance schedule as a series of Operational Change Proposals throughout the year. The maintenance schedule shall be reasonably flexible to accommodate any Hardware that requires additional maintenance activities to be undertaken, as identified by the specific Fujitsu Services Hardware supplier.

2.1.1.4 Configuration Management

The Data Centre Operations Service will be responsible for maintaining information regarding:

- data cabling and relationships between equipment;
- power cabling and relationships between equipment;
- rack locations;
- on-site equipment; and
- Documentation – e.g. site access forms & delivery notes.

2.1.2 Capacity Management

2.1.2.1 Further details of Fujitsu Services' obligations relating to capacity management are set out in section 2.1.5.4 of the CCD entitled '*Systems Management Service, Service Description*' (SVM/SDM/SD/0006).

2.1.2.2 The Data Centre Operations Service shall monitor the performance of the systems with regard to the actual traffic across Data Centre components to understand the success and failure rates of the traffic/data packets. This will enable the Data Centre Operations Service to manage the Services and utilise capacity to its optimum to ensure the performance levels of the system are maintained to minimise the impact and occurrence of Incidents.

2.1.3 Operational Change Proposals

The Data Centre Operations Service will create and/or impact Operational Change Proposals for operational changes in accordance with section 2.1.6 of the CCD entitled: '*Service Management Service, Service Description*' (SVM/SDM/SD/0007).

2.1.4 Service Management**2.1.4.1 Management of the Data Centre Estate**

To ensure the number of Hardware failures is kept to a minimum thereby mitigating risk to both Post Office and Fujitsu Services, Fujitsu Services shall:



1. Continually monitor the state of repair of the installed Hardware within the Data Centre and pro-actively manage the introduction of replacement parts in the appropriate circumstances; and;
2. Continually monitor the performance of the Hardware within the Data Centre and pro-actively log and assist in the resolution of any degradation in performance of such hardware.

2.1.4.2 Continuity of Spares Supply

Fujitsu Services will ensure that an adequate spares provision exists for all Hardware components within the Data Centre and will source new hardware components of an equivalent specification, if required, to ensure continuity of spares.

2.1.4.3 Continuous Service Improvement

Fujitsu Services will work closely with Post Office to identify and implement, where agreed, service or cost improvement initiatives within the Data Centre Operations Service.

2.1.4.4 Service Reporting

The Data Centre Operations Service shall, as required, provide service reporting for distribution to Post Office in accordance with the Service Management Service described in the CCD entitled: "*Service Management Service, Service Description*" (SVM/SDM/SD/0007).

2.1.4.5 Supplier Management

The Data Centre Operations Service will be responsible for managing all third party suppliers utilised in the support of the Data Centre environment. These activities include:

- defining the services that the supplier delivers;
- negotiating with the supplier;
- establishing a contract with the supplier;
- monitoring the performance of the supplier;
- performing regular supplier reviews including service initiative reviews;
- managing problems related to the supplier; and
- Managing changes related to the supplier.

2.2 Service Availability

The Data Centre Operations Service is not directly available to Post Office. It is a service internal to Fujitsu Services and will be available 24 hours per day, every day of the year to support and enable a Post Office Branch to trade in all levels of the Post Office business and complete Transactions at any time subject to any unavailability agreed through the Operational Change Proposal Process as described in Section 2.1.6 of the Service Management Service: Service Description (SVM/SDM/SD/0007) and with the availability Service Level Targets as documented in Section 2.3.5.2 of this document.

2.3 Service Levels and Remedies

2.3.1 General Principles

- 2.3.1.1 The Data Centre Operations Service has prime responsibility for SLT's with and without associated liquidated damages and performance measures as set out in sections 2.3.4 to 2.3.8 of this 'Data Centre Operations Service, Service Description'.



Data Centre Operations Service: Service Description



FUJITSU RESTRICTED (COMMERCIAL IN CONFIDENCE)

- 2.3.1.2 SLT's detailed in sections 2.3.4 and 2.3.5 of this Data Centre Operations Service, Service Description, which do not specify a measurement period are:
- reported monthly via the SRB; and
 - measured over a Service Level Measurement Period equating to a Post Office financial quarter; i.e.
 - a) January to March;
 - b) April to June;
 - c) July to September; or
 - d) October to December.
- 2.3.1.3 SLT's detailed in sections 2.3.4 and 2.3.5 of this Data Centre Operations Service, Service Description, which specify the "SLT Calendar Year" as the measurement periods are:
- a) reported monthly via the SRB; and
 - b) measured over a Service Level Measurement Period equating to a Rolling Year (with the exception of Central Systems Availability which is measured over a rolling five (5) year period), i.e. the current month and the previous eleven (11) months.

2.3.2 Service Level Relief

The "HNGX Capacity Management and Business Volumes" (PA/PER/033) sets out the limits (the Contracted Volume) which, if exceeded over a monthly period, will entitle Fujitsu Services to adjust the measurement of performance in respect of the Data Centre Operations Service SLT's, and Liquidated Damages Targets (LDT's) if applicable and affected by this excess. Such adjustments shall be made on the following basis:

1. Fujitsu Services shall identify, for joint consideration with Post Office, any failure to achieve the Data Centre Operations Service SLT's and / or LDT's within the month due to the limits being exceeded. Post Office and Fujitsu Services (acting reasonably) will agree the reasons for that SLT or LDT failure if it has been caused or contributed to by Fujitsu Services:
 - a) if the SLT or LDT failure occurs as a result of a Default by Fujitsu Services, no adjustment shall be made to the performance measurements for the affected SLT's or LDT's in respect of that month;
 - b) if the SLT or LDT failure is agreed to be as a result of the limits being exceeded, the performance measurements for the affected SLT's and LDT's in respect of that month shall be reported as reasonably required by the Parties;
2. Following each Service Level Measurement Period, Post Office and Fujitsu Services will assess whether, on average during the relevant Service Level Measurement Period, any of the limits have been exceeded by 10% (ten per cent) or more. In making that assessment, Post Office and Fujitsu Services shall consider the cause of any daily peaks in excess of the daily averages during the relevant Service Level Measurement Period and disregard the measurements in respect of those days where the peaks have arisen as a result of a Fujitsu Services Default. If, having made this assessment, Post Office and Fujitsu Services agree that a limit has been exceeded by 10% (ten per cent) and within any three (3) consecutive months, Post Office and Fujitsu Services shall meet to discuss, (acting reasonably) any appropriate changes to the applicable Data Centre Operations Service SLT's and LDT's; and
3. Any dispute between Post Office and Fujitsu Services arising in connection with the application of this section 2.3.2 of this Data Centre Operations Service, Service Description shall be resolved in accordance with the Dispute Resolution Procedure.



2.3.3 Rectification Plan

See paragraph 7.1 of Schedule C1 of the Agreement.

2.3.4 Service Levels for which Liquidated Damages Apply

2.3.4.1 Values for Liquidated Damages set out below in sect 2.3.4 are baseline figures at the start of the HNG-X contract (Trigger Point is 18th September 2009 in year 2009/10) hence will be uplifted annually by RPI as per the Agreement.

2.3.4.2 Data Delivery: APS to PODG

- a) APS SLT's are of generic application to APS Clients and unless otherwise stated by Post Office, the APS shall be fully available in a Branch whenever that Branch is open, and trading.
- b) The APS SLT's and LDT's are specified in this section of this Data Centre Operations Service, Service Description. The relevant performance measures for all APS Clients (for which services are being provided) shall be aggregated for such purpose of those SLT's, LDT's and Additional Remedy Levels (ARLs). All APS Clients subsequently introduced shall be included in that aggregate unless it is specifically agreed in accordance with the Change Control Procedure.
- c) The AP Client Transaction File shall be delivered to PODG before 03:00 of the AP Client Delivery Day.
- d) Failure to deliver the AP Client Transaction File to PODG before 23.59 of the AP Client Delivery Day shall attract Liquidated Damages as outlined in table 1 below

Table 1: Data Delivery: APS to PODG

Description	SLT	Liquidated Damages Formula
Failure to deliver files to PODG by 23:59 of the AP Client Delivery Day, per SLT Calendar Year	<=2(*)	Number of Transactions in the non delivered PODG data file x 1.87p(**)

(*) No more than two days on which Fujitsu fails to deliver all of the APS files by 23:59 of the AP Client Delivery Day per calendar year

(**) 1.87p is the figure for the Financial Year 2019 and will be uplifted annually by RPI as per the Agreement.

2.3.4.3 Not used

Table 2: Not used

2.3.4.4 Transaction Times: Banking Functions Transactions

Further to CCN1673a the HNG-A Gaps Counter Position supporting infrastructure, SYSMAN3 and Residual Release 17 Component and Infrastructure shall be operated to 31st March 2022.

For the purposes of Banking Functions Transactions, the SLT defined in Table 3: Transaction Times: Banking Functions Transactions below, are the result of the following calculation:

- a) for each Banking Functions Transaction, Fujitsu Services shall record the time "T1" as the time elapsed between the request being received into the Branch Access Layer and the corresponding authorisation being returned back from the Branch Access Layer;
- b) for each Banking Functions Transaction, Fujitsu Services shall record the time "T2" which elapses between the time the request leaves the Fujitsu Services' domain for routing into the Banks' domain and the corresponding authorisation being received back into the Fujitsu Services' domain from the Banks; and



Data Centre Operations Service: Service Description

FUJITSU RESTRICTED (COMMERCIAL IN CONFIDENCE)



- c) Fujitsu Services shall calculate a value "T" for each Banking Functions Transaction, as follows:

$$T = T1 - T2$$

In addition:

- Maximum Counter Wait Period (MCWP) minus Maximum Authorisation Agent Wait Period (MAAWP), referred to as "Additional Time", shall not be less than 15 seconds.
- Any changes to the MCWP and / or MAAWP as referred to in section 2.3.4.4.2 below, where the "Additional Time" is more than or equal to 15 seconds shall be subject to change as defined in the CCD entitled *"Fujitsu Services/Post Office Interface Agreement for Operational Business Change – Product"* (CS/PRD/058) and changes where the MCWP is greater than 40 seconds and / or the resulting "Additional Time" is less than 15 seconds shall be subject to agreement under the Change Control Procedure.
- Banking Functions Transactions shall be those for which a request is generated and a corresponding authorisation is received from the Banks before the earliest of the following events:
 - the MCWP has expired;
 - the Banking Functions Transaction is declined by the Clerk; and
 - the Banking Functions Transaction fails, and

- d) No other Banking Functions Transaction shall be included in the calculation set out in Table 3 below.

Table 3: Transaction Times: Banking Functions Transactions

Until Payment and Banking Service Trigger Point PBS3, Commencement of Payment and Banking Pilot, the following Service Level Target applies:

Description	SLT	Liquidated Damages Formula
Average time (T) for ALL Banking Functions Transactions, excluding those where any part of the HNG-X System required to perform the Banking Functions Transaction has migrated to the Post Office Cloud.(**)	< = 2.0 seconds	Number of Transactions x(average time of ALL Transactions – 2.0) * 1.30p (*)

(*) 1.30p is the figure for the Financial Year ending March 31st 2019 and will be uplifted annually by RPI as per the Agreement.

(**) Daily targets measured, and aggregated over a period of one full calendar month

Between Payment and Banking Service Trigger Points PBS3, Commencement of Payment and Banking Pilot and PBS5, Completion of Migration to Payment and Banking Service, the following Service Level Target applies:

Description	SLT	Liquidated Damages Formula
Average time (T) for ALL Banking Functions	< = 2.0 seconds	Number of Transactions x(average time of ALL



Data Centre Operations Service: Service Description

FUJITSU RESTRICTED (COMMERCIAL IN CONFIDENCE)



Transactions performed at Counter Positions not yet migrated to Payment and Banking Service (i.e. Banking Transactions other than PBS Banking Transactions (**)), excluding those where any part of the HNG-X System required to perform the Banking Functions Transaction has migrated to the Post Office Cloud (**)		Transactions – 2.0) * 1.30p (*)
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(*) 1.30p is the figure for the Financial Year ending March 31st 2019 and will be uplifted annually by RPI as per the Agreement.

(**) Daily targets measured, and aggregated over a period of one (1) full calendar month.

(***) Note: Service Level Targets for transaction time performance for PBS Banking Transactions are defined separately, in Schedule I6 of the Agreement – Payment and Banking Service: Service Description.

After Payment and Banking Service Trigger Point PBS5, Completion of Migration to Payment and Banking Service, the following applies:

Service Level Targets for transaction time performance for PBS Banking Transactions are defined in Schedule I6 of the Agreement – Payment and Banking Service: Service Description.

2.3.4.4.1 NB Request, NB Authorisation and NB Confirmation Action

Fujitsu Services shall ensure that:

Following successful NB Token Validation, a Banking Function Transaction shall not proceed unless a network connection to the Data Centre can be reasonably expected to be established to obtain on-line NB Authorisation. Once that connection has been established, a NB Request shall be sent to the Banks and the Banking Function Transaction shall only proceed if a positive NB Authorisation is received from the Banks and that Banking Function Transaction is not Declined by the Counter Clerk. In the event that the Counter Clerk Declines a Financial Transaction, a C0 Confirmation shall be sent on-line to the Banks.

- There shall be no local facility within a Branch to override a NB Decline response in an NB Authorisation.
- If the NB Authorisation is not for the same amount as the NB Request, the Banking Function Transaction will be Declined by the NB System, except in the case of a NB Request for a Banking Function Transaction type "Withdraw Limit", which will be permitted to proceed subject to the maximum limit, set by Reference Data.
- The MAAWP and the MCWP shall be:
 - 1) Set as parameters in the NB System;
 - 2) Common for all Banks; and
 - 3) Configurable by Fujitsu Services' Reference Data,
 and in any event, the MCWP shall not exceed 40 seconds.



Data Centre Operations Service: Service Description

FUJITSU RESTRICTED (COMMERCIAL IN CONFIDENCE)



If, after the generation of a NB Request at a Counter Position or after the Authorisation Agent makes a NB Request available to the Banks, a corresponding NB Authorisation is not received within the MCWP or MAAWP respectively, the Banking Function Transaction shall be declined.

2.3.5 Service Levels for which Liquidated Damages Do Not Apply

2.3.5.1 Not Used

Table 4: Not used

2.3.5.2 Central Systems Availability (Measured over a 5 year rolling period)

Table 5: Central Systems Availability (Measured over a 5 year rolling period)

Description	SLT
Outages in Post Office Core Hours where the Central Network, and Sales Database is unavailable to > 10% of Branches - Per SLT Calendar Year	<=3 Core Hrs
Outages in Post Office Core Hours where the Central Network, Sales Database AND the Banking Solution (CAPO, Santander, LINK) is unavailable to > 10% of Branches – Per SLT Calendar Year	<=8 Core Hrs
Outages in Post Office Core Hours where the Central Network, Sales Database, the Banking Solution (CAPO, <u>Santander, LINK</u>) AND Other Services (ETU, DVLA, PAF, APOP, DCS) are unavailable to > 10% of Branches – Per SLT Calendar Year	<=14 Core Hrs

Note: For the avoidance of doubt, the above Service Level Target shall only apply to those systems hosted in the Data Centre. For those elements of the HNG-X System migrated to and hosted within the Post Office Cloud, these Service Level Targets shall not apply.

N.B. In Table 5 above, all references to “Banking Solution (CAPO, Santander, LINK)” means those elements of the HNG-X System providing the Banking Business Capability for those Counter Positions not yet migrated to the Payment and Banking Service. Also in Table 5 above, all references to “DCS” means those elements of the HNG-X System providing the debit and credit card elements of the Payment Management Business Capability for those Counter Positions not yet migrated to the Payment and Banking Service. The Payment and Banking Service has separate Availability SLTs, as defined in Schedule I6, Payment and Banking Service: Service Description.

2.3.5.3 Data Delivery: BRDB to CFS & Credence

Table 6: Data Delivery: TPS to POLSAP & Credence

Description	SLT
Data Delivery – Outbound to Credence and CFS	
Transaction records to Credence PODG File Shares – failures per SLT Calendar Year	<=2
Horizon On-line transactions received and logged in the Data Centre between 19:00hrs and 18:59hrs daily will be available in data files in the Credence and CFS PODG File Shares and sub systems by 03:00 the day following the cut off.	100%
External transactions received at the point of use (*) between 20:00hrs	



Data Centre Operations Service: Service Description

FUJITSU RESTRICTED (COMMERCIAL IN CONFIDENCE)



and 19:59hrs daily will be available in data files in the Credence and CFS PODG File Shares by 03:00 the day following the cut-off.

(*) this specifically excludes the time taken to process the file through PODG

2.3.5.4 Data Delivery: BRDB to CWC - Outbound LFS

Table 7: Data Delivery: Branch to POLSAP - Outbound LFS

Description	SLT
Pouch collection failures per SLT Calendar Year	<=3
Pouch collections delivered to CWC PODG File Shares within 48hrs of creation date	100%
Cash on Hand details failures per SLT Calendar Year	<=3
Cash on Hand details delivered to CWC PODG File Shares within 48hrs of creation date	100%

2.3.5.5 Data Delivery: Reconciliation

Table 8: Data Delivery: Reconciliation Production of Reconciliation Reports NB000, NB101, NB102

Description	SLT
Delivery by 08:05hrs Day B (providing the LREC is received by Fujitsu Services at 23:59:59hrs Day A) this is irrespective of a DRS failure. Delivery by 08:05hrs Day B (providing the LREC is received by Fujitsu Services at 01:59:59hrs Day B). If there is a DRS failure the target is 10.05hrs Day B. If the LREC is received by Fujitsu Services between 02.00hrs and 22:00hrs Day B the file will be delivered in line with the target of receipt by 01:59:59hrs Day B but the file will not be enriched with the LREC data until such time as the data is available	<=2 failures in total per SLT Calendar Year
If there is a failure within the Fujitsu Services domain on a system other than DRS or TES which is being utilised in the generation of the reconciliation and settlement reports, delivery of said reports will be by 12.00hrs Day B. If the system failure is either of the DRS or TES, then said reports will be delivered by 18.00hrs Day B	100%

Table 9: Data Delivery: Reconciliation Production of CAPO & Santander Files

Description	SLT
Number of failures of REC File delivered to CAPO daily by 03.00 hrs on Day B	<=2
Number of failures of REC File delivered to Santander daily by 03.00 on hrs Day B	<=2
REC Files will be delivered to CAPO by 16.00 hrs on Day B	100%
REC Files will be delivered to Santander by 18.00hrs on Day B	100%



Data Centre Operations Service: Service Description

FUJITSU RESTRICTED (COMMERCIAL IN CONFIDENCE)



Description	SLT
REC Files are dispatched to CAPO and Santander by 00.10hrs daily	N/A

2.3.5.6 Section not used

Table 10: Table not used

2.3.5.7 Availability: TESQA

- Fujitsu Services shall, upon the expiry of each SLT Calendar Year, measure the time that TESQA was unavailable to be logged on to by TESQA Users as a proportion of the total time between 07:00hrs and 22:00hrs on each day of that year, termed "TESQA Unavailability".
- Fujitsu Services shall notify Post Office in advance of the overnight start and finish times of such overnight maintenance periods.
- Fujitsu Services shall use reasonable commercial endeavours to:
 - Ensure that TESQA is available to be logged on to by TESQA Users under normal operation on a 24 x 7 (outside of 07:00hrs and 22:00hrs) basis other than during periods of daily overnight maintenance; and
 - Ensure that during such overnight maintenance periods TESQA is taken off-line for a total period of no longer than 30 minutes.

NB. For Table 11 below: For HNG-X, banking transactions from HNG-X branches are not forwarded from the Branch Database to the DRS during the day. This means that for transactions that go via the DRS, they will only be counted for SLT purposes at the point they are received within the DRS, rather than when they are received by the Branch Database.

Table 11: Availability: TESQA

Description	SLT
TESQA availability between 07:00hrs and 22:00hrs for SLT Calendar Year	99.75% which = ≤13hrs 30minutes downtime
Transaction received in the Data Centre between 07.00hrs and 20.00hrs daily will be available within 15 minutes on the TESQA for the SLT Calendar Year	97%
Transactions received in the Data Centre between 20.00hrs and 22.00hrs daily will be available within 40 minutes on the TESQA for the SLT Calendar Year	97%
Transactions received in the Data Centre between 22.00hrs on Day A and 07.00hrs on Day B daily will be available within 4 hours on the TESQA for the SLT Calendar Year	100%

Note: When the TESQA element of the HNG-X System is migrated to Post Office Cloud, then the first of the Service Level Targets in the above table "TESQA availability between 07:00hrs and 22:00hrs for SLT Calendar Year shall no longer apply.

2.3.5.8 Transaction Times: Basket Settlement Transactions



Data Centre Operations Service: Service Description

FUJITSU RESTRICTED (COMMERCIAL IN CONFIDENCE)



Table 12: Transaction Times: Basket Settlement Transactions

Description	SLT
Average time(*) for a Basket Settlement , excluding those where any part of the HNG-X System required to perform the Basket Settlement Transaction has migrated to the Post Office Cloud.	<= 1.5 Seconds
Maximum time(*) for a Basket Settlement (within the 95 Percentile of average basket size), excluding those where any part of the HNG-X System required to perform the Basket Settlement Transaction has migrated to the Post Office Cloud. This figure is reported as a percentage.	<=6.5 Seconds
(*) is the time elapsed between the request being received into the Branch Access Layer and the corresponding response being returned from the Branch Access Layer. The above 2 SLT measures are valid as long as the agreed average basket size stated in the CCD entitled " <i>HNGX Capacity Management and Business Volumes</i> " (PA/PER/033 section 3.2.4 Baskets) is not exceeded.	

2.3.5.9 Section not used

Table 13: Table deleted

2.3.6 Operational Level Targets

There are no specific operational level targets (OLT) associated with the Data Centre Operations Service. However, OLT's exist and are documented in the operational level agreements referenced in Table 19 of this Data Centre Operations Service, Service Description.

2.3.7 Performance Metrics

2.3.7.1 Section not used

Table 14: Table deleted

2.3.7.2 Data Delivery: Outbound CTS File to PODG

Table 15: Data Delivery: Outbound CTS File to PODG

Description	PM
CTS file delivered to PODG by 07:30hrs daily	100%

2.3.7.3 Section not used

Table 16: Table deleted

2.3.7.4 Query Time: TES QA



Data Centre Operations Service: Service Description

FUJITSU RESTRICTED (COMMERCIAL IN CONFIDENCE)



- For the purposes of assessing TESQA query time, a properly constrained Transaction query is one of:
 - a) A PAN and a date / time range of 31 days or less (rolling);
 - b) A PAN, an amount and a date / time range of 31 days or less (rolling);
 - c) A PAN, a Banking Functions Transaction and a date / time range of 31 days or less (rolling);
 - d) A PAN, a Branch, a frequency greater than 1 and a date / time range of 31 days or less (rolling);
 - e) No PAN, but an amount greater than 4,999.98 and a date range of less than one (1) day; or
 - f) No PAN, but a frequency greater than four (4) and a date range of less than one (1) day.
- If Fujitsu Services persistently fails to achieve the performance metric as defined in Table 17 below as a result of a lack of capacity or performance of the HNG-X Central Infrastructure, then increases in capacity or performance required to address the deficiency shall be dealt with by the Capacity Management Service.
- Fujitsu Services shall report, if required by Post Office, the TESQA query times. This report will show, for different periods during 07:00hrs and 22:00hrs of each day, the query times for each type of query (including for properly constrained Transaction queries, unconstrained Transaction queries, data queries and count only queries).

Table 17: Query Time: TES QA

Description	PM
The query time for properly constrained Transaction queries on the TES QA between 07.00hrs and 18.00hrs	<=20 seconds

2.3.8 Design Targets

There are no design targets associated with the Data Centre Operations Service.

2.4 Service Limits and Volumetrics

Details can be found in the CCD entitled "*HNGX Capacity Management and Business Volumes*" (PA/PER/033).

2.5 Assets and Licences

2.5.1 Assets

Assets relevant to the Data Centre Operations Service are set out within the Asset Register (see '*Asset Transfer Register*' (COM/MGT/REP/0001)).

2.5.2 Licenses

There are no licences associated with the Data Centre Operations Service.

2.6 Charges

2.6.1 Operational Fixed Charge

See Schedule D1 of the Agreement.



2.6.2 Operational Variable Charge

The Data Centre Operations Service Operational Variable Charge is calculated against the number of Transactions processed at a price per Transaction as defined in Schedule D1 of the Agreement. The price is therefore only variable when the forecast of Transactions per annum changes from the previous year's forecast of Transactions, as defined in the CCD entitled: "HNGX Capacity Management and Business Volumes" (PA/PER/003). Where the forecast of Transactions has changed, Fujitsu Services shall, on six (6) months' notice, inform Post Office of such change.

2.6.3 Additional Operational Variable Charge

There are no additional operational variable charges applicable to the Data Centre Operations Service.

2.7 Dependencies and Interfaces with Other Operational Services

Any changes agreed between Post Office and Fujitsu Services to the scope or availability of the Data Centre Operations Service and/or any of the other Operational Services will be agreed in accordance with the Change Control Procedure. This section describes the interfaces with other Operational Services as at the Amendment Date as follows:

2.7.1 Not used

2.7.2 The Service Management Service

Any changes to the scope of the Data Centre Operations Services may result in changes to the Service Management Service (see 'Service Management Service: Service Description' SVM/SDM/SD/0007).

2.7.3 The Systems Management Service

Any changes to the scope of the Data Centre Operations Services may result in changes to the Systems Management Service (see 'Systems Management Service: Service Description' SVM/SDM/SD/0006).

2.7.4 The Central Network Service

Any changes to the scope of the Data Centre Operations Service may result in changes to the Central Network Service (see 'Central Network Service: Service Description' SVM/SDM/SD/0012).

2.7.5 Removed by CCN1623b

2.7.6 The Management Information Service

The Management Information Service may request data to support MIS Reports delivered internally within Fujitsu Services or to Post Office. If the scope of the Data Centre Operations Service changed this may result in changes to the 'Management Information Service: Service Description' (SVM/SDM/SD/0016).

2.7.7 The Reference Data Management Service

**Data Centre Operations Service: Service Description****FUJITSU RESTRICTED (COMMERCIAL IN CONFIDENCE)**

Any changes to the scope of the Data Centre Operations Service may result in changes to the Reference Data Service (see '*Reference Data Management Service: Service Description*' SVM/SDM/SD/0013).

If the scope of the Data Centre Operations Service changed, any alternative Service Provider would have to take over this role.

2.7.8 The Operational Business Change (Branch Change) Service

Any changes to the scope of the Data Centre Operations may result in changes to the Service OBC (Branch Change) Service (see '*Operational Business Change (Branch Change) Service: Service Description*' SVM/SDM/SD/0014).

2.7.9 The Third Line Support Service

Any changes to the scope of the Data Centre Operations Service may result in changes to the Third Line Support Service (see '*Horizon Online 3rd Line Application Support Service: Service Description*' SVM/SDM/SD/0004).

2.7.10 The Security Management Service

The Data Centre Operations Service will support the Security Management Service in ensuring the appropriate levels of security are met in respect of access to the HNG-X System. Any changes to the scope of the Data Centre Operations Service may result in changes to the Security Management Service (see '*Security Management Service: Service Description*' SVM/SDM/SD/0017).

2.7.10.1 Obligations – PCI

As per CCN1332A, to assist Post Office Ltd with their ongoing PCI-DSS compliance Fujitsu Services have an obligation to update the PCI Server Build Document on an annual basis: DES/PPS/HLD/2205 *All Platform Service List*.

2.8 Post Office Dependencies and Responsibilities

Post Office responsibilities are as set out in Schedule A5 of the Agreement.

2.9 Business Continuity

2.9.1 Failover from live to Disaster Recovery Data Centre

2.9.1.1 Failover to the DR Data Centre

Switchover to backup systems within the live Data Centre shall be automated and failover to the DR Data Centre shall be manually configured.

Except for those sub-services in Table 18 below which have been migrated to and are hosted on the Post Office Cloud, for which Post Office shall be responsible for failover testing, the following sub-services shall be operational from the DR Data Centre within the specified table below of the approval for invoking Data Centre disaster recovery:

Table 18: Failover to the DR Data Centre

Service Description	DR availability target from official notification
<ul style="list-style-type: none">• Network Banking Service (POCA/VocaLink/Santander)• Debit Card System• On-line Transaction Processing Service	Within 2 hours



Data Centre Operations Service: Service Description

FUJITSU RESTRICTED (COMMERCIAL IN CONFIDENCE)



<ul style="list-style-type: none"> Automated Payments Outpay; (APOP) Bureau Service Web Services Logistics Feeder Service (LFS) Automated Payment Service (APS) Department of Vehicle Licensing Authority – Post Office MOT Enquiry Electronic Top-ups Service Postal Address File (PAF) service Transaction Enquiry Service (TES) Track and Trace PODG Collect & Return Web Service BRSS Data Access Server (BDAS) 	Within 2 to 5 hours
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NB:

- References to "Network Banking Service (POCA/VocaLink/Santander)" and "Debit Card System" means those elements of the HNG-X System providing the Banking Business Capability and the debit and credit card elements of the Payment Management Business Capability, respectively, for those Counter Positions not yet migrated to the Payment and Banking Service. The Payment and Banking Service has separate arrangements for Business Continuity. As defined in Schedule I6, Payment and Banking Service: Service Description.
- Priority would be given to any services crucial at the time of DR e.g. DVLA if at the beginning/end of the month. The PAF service, if the failure occurred at the Christmas mailing peak period.
- Due to the single BRSS Data Access Server (BDAS) in the live data centre, failure of BDAS will involve a failover to the DR Data Centre in failure scenarios, which will incur downtime. Such downtime is estimated as a 2-5 hour outage to the BDAS service whilst a new instance is recovered from the boot disk clone (similar to the times as described in Table 18, above.) Failure of BDAS alone would not initiate DR.

2.9.1.2 Testing

The DR Data Centre has two functions, namely for business continuity/DR purposes on the one hand and for Release testing on the other. Data Centre business continuity and DR testing will not be performed during the hours of 9:00am to 5:30pm Monday to Friday, except in the case of a full Data Centre fail-over test. BC and DR tests will be done at an agreed time with POL out of normal business hours, i.e. evenings and weekends and there may well be charges associated to complete these at these times. All Data Centre failover tests will assess impacts of interactions with Post Office Cloud and those elements of the HNG-X Systems hosted within it. Any tests needing to be repeated due to failings in any of the Post Office Responsibilities in respect of Post Office Cloud will incur charges for the repeat planning and testing, such activity to be provided under a CWO and charged on a time and materials basis using the rates set out in paragraph 10.4(b) (*Development Resources*) of Schedule D1 (*Charges*). Whenever such Data Centre business continuity, DR testing and/or Data Centre fail-over tests take place, the DR Data Centre will not be available for Release testing.

2.9.2 Frequency



Fujitsu Services will carry out minimum of one (1) walkthrough and one (1) operational test per calendar year for the Data Centre, subject to agreeing the actual dates for such tests with Post Office, such agreement not to be unreasonably withheld. Such tests shall be carried out in accordance with the Working Document entitled: “HNG-X Business Continuity Framework” (SVM/SDM/SIP/0001).

2.10 Documentation Set Supporting the Service.

In addition to the document set listed at section 0.4 of this Data Centre Operations Service, Service Description, the document set listed in Table 19 below supports the delivery of the Data Centre Operations Service. Should any elements of the Data Centre Operations Service be changed following agreement with Post Office, Fujitsu Services will ensure these documents are also reviewed and amended where necessary in line with changes agreed.

Table 19: Documentation

Document Ref	Document Title
CS/OLA/046	Electronic Top Up Operational Level Agreement
CS/OLA/051	HNG-X Operational Level Agreement for the POCA Network Banking Service between Fujitsu Services, Post Office Ltd and HP (JP Morgan)
CS/OLA/055	Operational Level Agreement for TESQA between Fujitsu Service and Post Office Ltd
CS/OLA/057	Operational Level Agreement for Track & Trace
SVM/SDM/OLA/0020	Operational Level Agreement for Network Banking between Fujitsu Services, Post Office Ltd and Vocalink for HNGX

3 Annex A: PODG Client File Re-Send Service

3.1 Summary

- 3.1.1.1** The PODG Client File Re-Send Service allows Post Office to request that files transferred to a Post Office Client from PODG, including AP Client Transaction files, are re-sent to the Post Office Client. The date on which the request is made to Fujitsu by Post Office Limited must be within thirty days of the date on which the file was originally made available by PODG to be transferred to the Client.
- The PODG Client File Re-Send Service is a “Call Off” Service, with an appropriate charge as set out in Schedule D1 of the Agreement and in section 4.5 of this document. The service is invoked by Post Office Limited using the TfS (Triole for Service) process.
 - Fujitsu Services staff will be suitably trained to carry out the PODG Client File Re-Send Service.

3.2 Service Definition

3.2.1 Service Components

The PODG Client File Re-Send Service comprises the following components:

- a) Request for file re-send – Post Office responsibility;
- b) File re-send and confirmation to Post Office – Fujitsu Services responsibility; and
- c) Liaison with the Post Office Client – Post Office responsibility.



Each of the above components is described within this Annex A to this 'Data Centre Operations Service, Service Description'. Further lower level detail is provided within the Working Document entitled: "PODG Client File Re-Send Service – Joint Working Document" (SVM/SDM/PRO/0007).

3.2.2 Request for file re-send

Post Office shall make the request by TfS, upon completion of a new OBC19 form. When raising the TfS the OBC 19 unique reference will be quoted (see "PODG Client File Re-Send Service – Joint Working Document" SVM/SDM/PRO/0007) and shall also contact Fujitsu Services by telephone notifying that a request has been made. The TfS call shall state:

- a) The associated OBC 19 unique reference
- b) the Client name;
- c) the name(s) and transfer date of the file(s) required to be re-sent;
- d) whether the file(s) is to be sent to the Client or to the Post Office;
- e) the addressee and location if the file(s) is to be sent on CD-ROM to Post Office; (Only in an extreme DR situation)

3.2.3 File re-send and confirmation to Post Office

3.2.3.1 Fujitsu Services will re-send the requested file(s) to the Client over the automated interface between PODG and the Client or if it is advised that the PODG route is 'not working' copy the file onto a CD-ROM and despatch this via secure courier, as requested by Post Office (Only in an extreme DR situation).

3.2.3.2 Fujitsu Services will advise Post Office when the file "re-sends" to the Client has been achieved or when the CD-ROM has been despatched.

3.2.4 Liaison with Client

Post Office shall liaise with the Client and advise the Client when the file has been re-sent, and confirm that the Client has received the file.

3.2.5 Service Availability

The PODG Client File Re-Send Service will be available for receipt and processing of service requests between the hours of 09:00 to 17:30 Monday to Friday excluding all Bank Holidays.

3.3 Service Levels and Targets

3.3.1 Operational Service Levels

Fujitsu Services will use reasonable commercial endeavours to action the Post Office request for a PODG Client File Re-Send within the Working Day on which the request is received. However, the minimum lead-time between receipt of the PODG Client File Re-Send request and the file re-send is four (4) hours.

3.4 Service Limits

- The PODG Client File Re-Send Service will be operated on a per Client basis. Therefore each request shall be for either:
 - a) one (1) PODG Route for one (1) Client and up to a maximum of seven (7) files per request; or
 - b) Post Office and for a maximum of one (1) file per request.



- The maximum frequency of PODG Client File Re-Send requests shall be two (2) requests per Working Day but limited to a total of five (5) requests per working week.

3.5 Charges

The PODG Client File Re-Send Service Charges are set out in Schedule D1 (Charges) of the Agreement.

Any file resend which is requested that is as a result of a failure in the Fujitsu supplied service will not be subject to a charge.

3.6 Post Office Dependencies and Responsibilities

Post Office shall be responsible for the following:

- a) submission of the PODG Client File Re-Send request to Fujitsu Services;
- b) liaison with Client; and
- c) Obtaining all necessary consents, authorisations and notifications from the relevant Data Controllers, to enable personal data to be processed by Fujitsu Services as part of this service, in compliance with the Data Protection Act 1998.

3.7 Documentation Set Supporting the Service

See section 2.10 of this Data Centre Operations Service, Service Description.

4 Annex B: Not Used

5 Annex C: Post Office Data Gateway Service

5.1 Summary

- Annex C applies to the Post Office Data Gateway (PODG) Services.
- Fujitsu Services will provide the following PODG Service components:
 - **PODGe** – The external (Post Office client facing) PODG service. The PODGe service uses JSCAPE managed file transfer software and the RSYNC file copying software. PODGe provides the following services:
 - A network interface to external endpoints (Post Office, Post Office clients and Post Office suppliers) for data file transfers;
 - A web-based file transfer service through which registered users can collect data files from PODG using HTTPS;
 - An e-mail service for e-mailing data files to registered users;
 - An anti-virus checking service;
 - A service to synchronise files with the PODGi server;
 - A data file housekeeping service;
 - A data file logging service;
 - **PODGi** – The internal (Fujitsu Services datacentre facing) PODG service. The PODGi service uses CAMEL open-source integration framework for routing and



Data Centre Operations Service: Service Description



FUJITSU RESTRICTED (COMMERCIAL IN CONFIDENCE)

mediation and the RSYNC file copying software. PODGi provides the following services:

- A service to audit data files transferred across the Fujitsu Services datacentre external boundary;
- A service to process files according to the rules defined in the PODG route definition including the transformation of files;
- A web-based support interface (for use by Fujitsu Services support);
- A data file compression and decompression service;
- An anti-virus checking service;
- A service to synchronise files with the PODGe server;
- A data file housekeeping service;
- A data file logging service;
- The PODG service will provide technical interfaces as described in the documents entitled:
 - 'Post Office Data Gateway to <Client> Technical Interface Specification for FTP Connections' (REQ/INF/TIS/1988)
 - 'Post Office Data Gateway to <Client> Technical Interface Specification for FTPS Connections' (REQ/INF/TIS/1991)
 - 'Post Office Data Gateway to <Client> Technical Interface Specification for SFTP Connections' (REQ/INF/TIS/1982)
 - 'Post Office Data Gateway to <Client> Technical Interface Specification for Connect:Direct Connections' (REQ/INF/TIS/1989)
- The PODG service will transform data in accordance with the AISs listed in the document entitled 'Fujitsu to Post Office PODG Log File Application Interface Specification' (DES/APP/AIS/1783)
- Fujitsu Services and Post Office Limited will manage the service in accordance with the 'Operational Level Agreement between Fujitsu Services Ltd Post Office Account and Post Office Limited for the Post Office Data Gateway' (SVM/SDM/OLA/1797)
- The service management of the PODG Service will be delivered within the existing service management framework between Fujitsu Services and Post Office Limited as described in section 6.2.5 of this 'Data Centre Operations Service, Service Description'
- The charge for the PODG Service is included in the Charges for the Data Centre Operations Service.

5.2 Service Definition

5.2.1 Platform Hosting

- Fujitsu Services will host the PODG Service within its live Data Centre. The PODGe service will be located in a separate DMZ.
There is no test/UAT PODG service. UAT proving with Post Office client UAT systems will use the live Data Centre PODG Service.
- The PODG Service within the DR Data Centre (normally hosting the SV&I PODG test systems) will act as the fail-over system for the production PODG Service. The failover availability target is documented in Table 17: Failover to the DR Data Centre.



- Fujitsu Services will extend its standard Data Centre Hardware and operating system maintenance and administration functions to encompass the PODG Service.
- The access control policy set out in the CCD entitled: “*Security Management Service, Service Description*” (SVM/SDM/SD/0017) will be applicable in relation to the PODG Service. In addition:
 - Fujitsu Services will take reasonable steps to protect the PODG Service from unauthorised external intrusion;
 - Fujitsu Services will manage and operate the PODG technical interfaces.Access to the web-based file transfer service will be from registered network locations.

5.2.2 Network

- Fujitsu Services will supply ISDN and Internet network services to support file transfer interfaces between PODG and external end-points (Post Office, Post Office clients or Post Office suppliers);

The ISDN network service is only available to existing Post Office client that transfer data files between PODG and an external end-points using ISDN;
- Fujitsu Services will manage the Horizon Online ISDN and Internet network services;
- The external network end-point will be supplied and managed by Post Office Limited, the Post Office client or the Post Office service supplier.

5.2.3 File Transfer Services

- Fujitsu Services will supply:
 - FTP
 - FTPS (Explicit)
 - SFTP
 - Connect:Direct and Connect:Direct Secure Plusfile transfer services;
- Fujitsu Services will supply a web-based file transfer service to support the collection of files from PODG by registered external users from a registered network location;
- Fujitsu Services will supply an e-mail service to transfer files to a registered external e-mail address.

5.2.4 Service Management

Fujitsu Services will:

- Manage the daily administration and system monitoring functions of the PODG service;
- The PODG scheduled maintenance window will still occur on Sundays between 13:00 and 16:00.
- Monitor the performance of the PODG service;
- Re-start the PODG service daily to enliven changes to PODG routes and/or PODG credentials;
- Back-up data files that are in-transit or which PODG has retained to meet the operational requirements e.g. the PODG Client File Re-Send Service:



- Incoming files into PODG are retained for 7 days;
- Outgoing files from PODG are retained for 37 days.

5.2.5 Incident Management

Any incidents that impact on the PODG service provided to Post Office Limited, its Clients or its suppliers will be reported and managed using the incident management process documented in the *Post Office Account Operations Incident Management Procedure* (SVM/SDM/PRO/0018).

Major Incidents involving the PODG service will be reported and managed using the *Post Office Account Major Incident Procedure* (SVM/SDM/PRO/0001).

Any breaches of security or attempted breaches of security will be reported and managed using the security incident management process documented in *Post Office Account Major Incident Procedure* (SVM/SDM/PRO/0001) and approved by Post Office Limited and Fujitsu Services Post Office Account.

The Fujitsu Services Duty Manager will be available as a point of contact for Post Office in the event that a problem requires escalation.

5.2.6 Service Availability

In normal operation, the PODG service is available 24 hours every day except for the scheduled daily re-start (see below).

A scheduled re-start of the PODG service will occur once per day to enable new configuration data to be activated.

The scheduled re-start will occur at 18:00. During the re-start the PODG service will be unavailable for approximately 15 minutes.

Data files will be made available for transfer to a destination end-point as defined in the PODG route definition which controls the processing of data files by that PODG route.

A data file transfer invoked from an external end-point may take place at any time that the PODG service is available.

5.2.7 Resilience

The PODG service is configured on two pairs of servers (PODGe and PODGi).

Within a datacentre each server is deployed on a blade in a blade server. The blade server provides resilience to a single blade failure. If a blade on which PODG is running fails then the blade server will automatically restart the PODG instance on a different blade.

To provide resilience against major failures one pair of servers is located in each datacentre. Only one pair of servers is running the live service at any one time.

The data storage used by the PODG service is mirrored between the two data centres. Data is automatically synchronised between the mirror copies.

In the event of a site failover, the IP addresses advertised by PODGe to Post Office clients for incoming connections are unchanged.

5.2.8 Business Continuity

The PODG service is deployed in the Fujitsu data centres.

The PODG service is configured with:

- The primary PODG service in the IRE11 data centre and a standby PODG service in the IRE19 data centre;



Data Centre Operations Service: Service Description



FUJITSU RESTRICTED (COMMERCIAL IN CONFIDENCE)

- The PODG data storage is synchronised between the IRE11 and IRE19 data centres;
- The Fujitsu Services data centre network infrastructure, including the internet and ISDN network services in both the IRE11 and IRE19 data centres.

In the event of a Major Business Continuity Incident (MBCI) with potential impact on business continuity of the PODG service then the standard Fujitsu Services business continuity plan (*HNG-X Services Business Continuity Plan (SVM/SDM/PLA/0002)*) will be invoked.

If there is a failure in the live (IRE11) datacentre, and Disaster Recovery is invoked, then the PODG service will be operational from the standby datacentre (IRE19) within 5 hours of approval for invoking datacentre disaster recovery being given by Post Office Limited (see also section 2.9 Business Continuity).

5.2.9 Service Levels or Targets

There are no contractual service levels or targets for the PODG service.

Fujitsu Services Post Office Account shall use reasonable commercial endeavours to meet the operational targets documented in the *Operational Level Agreement between Fujitsu Services Post Office Account and Post Office Limited for the Post Office Data Gateway (SVM/SDM/OLA/1797)*.

5.2.10 Capacity

The capacity of the PODG service will be managed by the HNG-X Capacity Management Service (see *HNG-X Capacity Management and Business Volumes (PA/PER/033)*).

For Awareness: The original requirements PODG-146/147/148 is REQ/CUS/CDE/1397 state that the Total Files per day will be baselined after migration of EDG routes is complete and then allow 25% for expansion (please refer to PA/PER/033).

To increase the capacity beyond the limits specified above, Post Office Limited shall submit a Change Request to Fujitsu Services Post Office Account.

For any further details regarding the PODG Capacity please refer to PA/PER/033 for the contractual Capacity position in regards to PODG.

The peak times for PODG are between 05:50 and 06:20 and 20:45 and 21:15 (processing of APOP files). During these times the system is processing a larger number of concurrent incoming files. It is therefore suggested that any large additional load is placed during the quieter times using the route active times to control when this takes place (route start time and route stop time). Smaller increments should be distributed during the day if possible.

By distributing route start/end times throughout the 24 hour period then we can aim to protect the system from receiving too many concurrent files to process. There must be a balance between these items to minimise Disk/CPU and network utilisation. E.g. if a large number of files are to be processed then these should be relatively small files. Likewise if a large file is to be transferred it should be done whilst the system is processing few other files

Whilst Fujitsu see no issue with the volumes presented, should we find through analysis that the internet circuits are being consumed with PODG related traffic, Fujitsu reserve the right to request Post Office Ltd raise a Change Request to amend/increase the bandwidth to ensure that bandwidth for other internet accessible services (e.g. smart meter, POLSAP HR, Ingenico, Bank of Ireland etc.) is not impacted.

5.2.11 Changes

Post Office shall raise changes to existing data transfer services, or introduce new data transfer services, in accordance with the process defined in '*PODG Client Connection Procedure*' (SVM/SDM/PRO/1871). An OBC19 form must be completed and submitted by



Data Centre Operations Service: Service Description

FUJITSU RESTRICTED (COMMERCIAL IN CONFIDENCE)



Post Office Ltd to Fujitsu Services Post Office Account in order to request changes to existing data transfer services, or introduce new data transfer services. Fulfilling the service request submitted via the OBC019 form does not require on site attendance. The service is not directed at specific branches – it is a data centre change with all activities carried out remotely.

The OBC019 form must include precise details of the Post Office Ltd requirements and must provide sufficient detail to allow Fujitsu Services Post Office Account to assess and respond with a charge and delivery schedule. The different request options that can be requested are broken down into categories which are detailed in the appendix to “*PODG client Connection Procedure*” (SVM/SDM/PRO/1871). In general, changes will be under one of the following areas:

- Addition of new routes
- Addition of new end points
- Changes, including removal, to existing routes
- Removal of end points
- One off ad hoc changes
- Consultancy.

5.2.12 Charges

The charges applicable to changes (see section 5.2.11) to existing data transfer services, or introduction of new data transfer services will be subject to individual quotations based on information provided on the OBC19 form submitted for the change. The change options that can be requested and the applicable charges are defined in Schedule D1 (Charges) of the Agreement.

6 Annex D: Collect and Return Web Service

6.1 Summary

Post Office Limited extended their 'Local Collect' services such that a facility exists whereby Web Purchasers may select a local Post Office as the delivery address of their parcels. Once the parcel is delivered to a Branch, the Web Purchaser may collect the parcel at their convenience using a suitable method of identification.

This was done by;

- Introducing two new platform instances in the IRE11 data centres that run in an active/active cluster configuration,
- Introducing two new platform instances in IRE19 for LST and two new platform instances for SV&I
- Providing connectivity to the service through the existing Huthwaite managed link (provided by Fujitsu)
- Re-use of the Reverse Proxy Service from Bluecoat® introduced by the Channel Integration Service
- Re-use of the Branch Database
- Re-use of the PODG gateway to transfer data to transaction and standing data between the solution components
- Please see the relevant Service Design (DES/SVS/HLD/2143).

6.2 Requirements



Data Centre Operations Service: Service Description

FUJITSU RESTRICTED (COMMERCIAL IN CONFIDENCE)



6.2.1 Service Level Requirements (warranty)

SECTIONS	COMPONENT	DESCRIPTION	REFERENCE
Shared Service Components	Bluecoat Proxy	Bluecoat is a reverse proxy service that is being deployed for the Channel Integration Service and will be utilised by the C&R	DES/NET/HLD/2084
Infrastructure Components	Collect & Return Web Service Platform	Virtual platform design for C&R	DES/APP/DPR/2067 DES/NET/HLD/2252 DES/PPS/PPD/2135
	Reverse Proxy Server for Internet	Low Level Design	DEV/INF/LLD/2087
Applications Components	GDC Application Design		DES/APP/HLD/2141
Support Groups (ITIL v3 Functions)	All internal support groups		Service Description
	Data Centre Operations	Hosting and support of the Horizon Online platforms	SVM/SDM/SD/0003
	Horizon Online 3rd Line Application Support Service	Technical Support Investigation and resolution of software incidents Producing workarounds	SVM/SDM/SD/0004
	Application Support Service (Fourth Line)	Software fixes for CWS Web Service	SVM/SDM/SD/0005
	Service Management	Service Management Release Management – packaging and deployment of patches, maintenance and major releases to the CWS platform Capacity Management – of the CWS platform	SVM/SDM/SD/0007
	System Management Service	Event Management System Monitoring (24x7) Software Distribution	SVM/SDM/SD/0006
	Central Network Service	- The Local Area Networks (LAN) within the main HNG-X Data Centres - The Intercampus Links between the main HNG-X Data Centres - The Wide Area Network (WAN) for connecting the HNG-X Data Centres to some	SVM/SDM/SD/0012



Data Centre Operations Service: Service Description

FUJITSU RESTRICTED (COMMERCIAL IN CONFIDENCE)



		Post Office Clients (DVLA, Merchant Acquirer, etc) - The Wide Area Network (WAN) for connecting the HNG-X Data Centres to some Fujitsu Services test and support environments - The Local Area Networks (LAN) within some Fujitsu Services test and support environments	
	Security Operations Service	Monitors operations and introduces specific protective security controls to maintain the integrity, availability and confidentiality of information used and produced by the various Services Key management	SVM/SDM/SD/0017
Processes	List all processes that apply		As per BMS and POA Processes and local procedures.
	Incident Management	Horizon Incident Management process Horizon Major Incident Management process	SVM/SDM/PRO/0018 SVM/SDM/PRO/0001
	Problem Management		SVM/SDM/PRO/0025
	Release Management	Planning and deployment of infrastructure patching and application fixes to the data centre environment	SVM/SDM/PRO/1520
	Availability Management	Monitoring and reporting of C&R availability	
	Capacity Management	C&R throughput to capacity limits. Peak load volumes. Aggregated availability data will be produced at 5 minute intervals. Proactive monitoring of storage capacity on C&R platform	

6.2.2 Service Levels, Key Performance Indicators (warranty)

The Collect & Return Service does not attract any SLA's or Liquidated Damages.

6.2.3 Key Performance Indicators

6.2.4 Measurement Periods

**Data Centre Operations Service: Service Description****FUJITSU RESTRICTED (COMMERCIAL IN CONFIDENCE)**

- The performance of the Collect & Return Service during each calendar month shall be measured against the OLT for availability, measured during the service hours.
- Where the Collect & Return Service is available but the Royal Mail web service is unable to access the Collect & Return system due to problems arising from components that are not part of the Collect & Return Service these periods will not be measured against the KPI's for availability or incident resolution. Examples of components that are not part of the Fujitsu managed service but must be available for Royal Mail partners to access the Collect & Return system include:
 - The Royal Mail web service
 - The internet
 - Postcode Anywhere.
- Where Fujitsu passes an incident for resolution to Royal Mail and Royal Mail does not provide support arrangements that are aligned to the Collect & Return Service (in terms of hours of cover) the period of waiting for Royal Mail to commence investigation and resolution activities that falls within the Collect & Return Service hours will not be counted against the KPI's for availability or incident resolution.
- KPI measurements are suspended in the event of a disaster being declared and the disaster recovery process being invoked.
- In the event of a disaster KPI calculations will only be resumed once the Collect & Return Service has been restored to normal operation.
- Where an emergency period of service outage has been agreed in advance with Post Office and Royal Mail and takes place within the supported hours of operation, this period will not count towards the availability KPI calculation.
- The KPI's identified only apply within the hours of 08.00hrs to 18.00hrs Monday to Friday and 08:00hrs to 13:00hrs on Saturday's excluding Bank Holidays.
- Service availability is calculated using complete loss of service periods during the supported hours of operation, ignoring any loss of service which has been pre-agreed with Post Office and Royal Mail for application of an emergency changes and ignoring any period in which a disaster has been declared and the service is not operating from the prime data centre.
- The calculation of resolution times for incidents is based on the supported hours of service. For example a severity 3 incident reported at 15.00hrs on a Wednesday will be regarded as fixed within target time if it is resolved before 15.00hrs on the following business day.