CONNECTIVITY CONSOLIDATED CONTRACT SCHEDULE

CONSOLIDATED SCHEDULE 5

TECHNOLOGY REFRESH PLAN AND PROCUREMENT PLAN

for Contract Number DCNS/080

Contents

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TECHNOLOGY REFRESH PLAN AND PROCUREMENT PLAN

This Consolidated Schedule sets out the Technology Refresh Plan and the Procurement Plan.

Capitalised terms used but not defined in this Consolidated Schedule are defined in Consolidated Schedule 1 (*Definitions*).

1   INTRODUCTION

1.1   In accordance with Clause 11 (*Equipment*) of this Consolidated Contract, this Consolidated Schedule sets out, as at the Contract Date, the Technology Refresh Plan at Appendix 1 to this Consolidated Schedule and the Procurement Plan at Appendix 2 to this Consolidated Schedule.

1.2   The Contractor shall keep the Technology Refresh Plan and the Procurement Plan updated in accordance with Clause 11 (*Equipment*) of this Consolidated Contract.

APPENDIX 1
TECHNOLOGY REFRESH PLAN

1 Purpose of the Technology Refresh Plan

1.1 In addition to setting out the information required by Clause 11.4, the purpose of the Technology Refresh Plan is to ensure that the Customer Authority's business operations and the Service remain available and cost effective, with minimal downtime being attributed to:

1.1.1 technology defects;

1.1.2 technology incompatibility;

1.1.3 skills not being available in the marketplace to support the technology;

1.1.4 Contractor or third party support not being available in relation to technology; and/or

1.1.5 technology operating outside of industry standards.

1.2 Part B of Schedule 3 (*Service Requirements and Contractor Service Descriptions*) set out further obligations of the Contractor in respect of the Technology Refresh Plan (including in Paragraphs 12.1.36 to 12.1.42 of Section 5 (*Equipment and Asset Management*)).

2 Review of the Technology Refresh Plan

2.1 In addition to the requirement to update the Technology Refresh Plan set out in Clause 11.4, the Contractor will review the status of the Technology Refresh Plan on a quarterly basis and provide the following information to the Customer Authority:

2.1.1 a description (including volume of each type of Equipment) together with the current status of each item of Equipment (i.e. current or not current), and an explanation of such status;

2.1.2 the details of any Equipment which may cease to be technically current within the 18 month period, so as to permit the Customer Authority to plan upgrades or replacements of the In Scope Technology and maintain technical currency at all times;

2.1.3 manufacturers' product plans, forward plans for product, version withdrawals and withdrawal notices in respect of any Equipment;

2.1.4 details of any relevant and appropriate upgrades, improvements or changes required to make any Equipment current;

2.1.5 where information is readily available from the manufacturer, the forecasted technical currency of each type of Equipment for the following three years .

2.1.6 where a software or hardware upgrade is not possible due to various factors, the Technology Refresh Report will highlight these factors together with recommendations to establish the functional and non-functional benefits of the relevant solutions.

3   Technology Refresh Plan

Figure 1 – High Level Technology Refresh Plan by Services
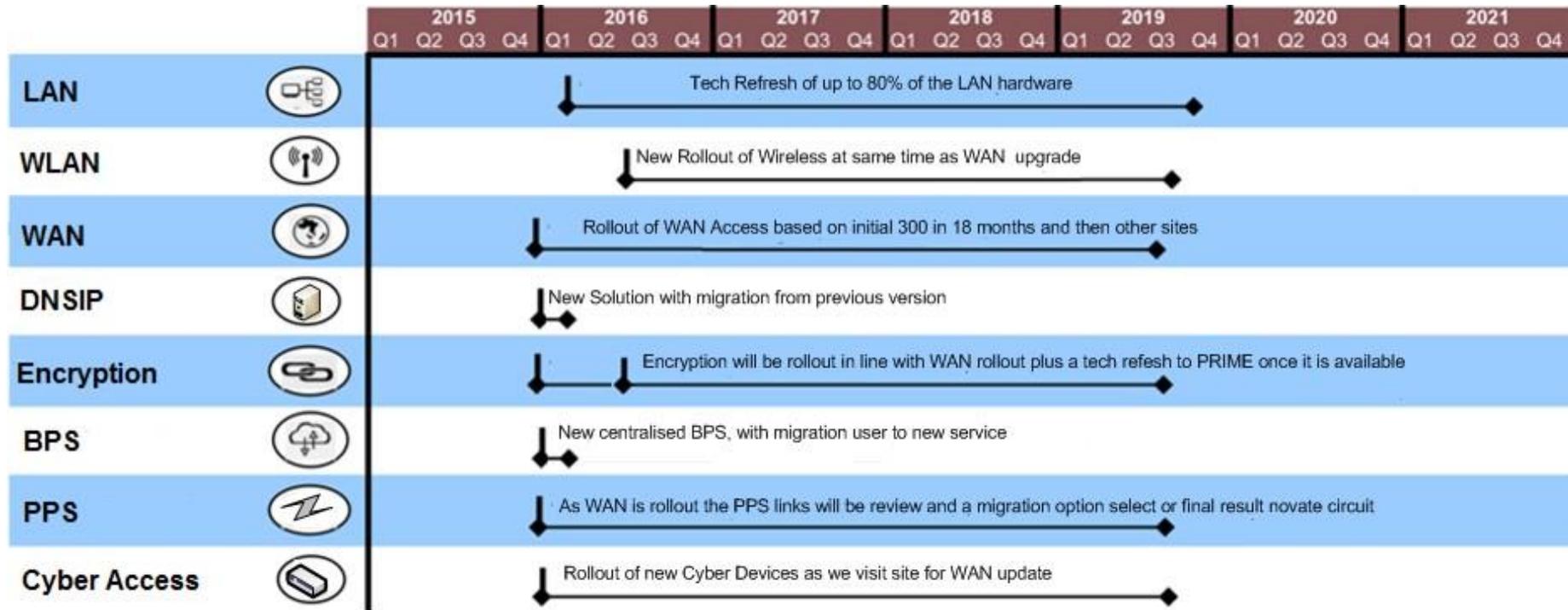
Technology	Manufacture	Model	Volumn in Service	Current / Future	Service Start	Service End	Hardware / Software	Refresh cycle	Comment
LAN – Tech Refresh programme as part of BAU to upgrade EOL or failing switch hardware									
Switches	Cisco	All		Current	2016	2020	Hardware	5 years	Replaced by Juniper Switches as EOL
Switches	Nortel	All		Current	2016	2018	Hardware	3 years	Replaced by Juniper Switches ASAP
Switches	3com	All		Current	2016	2018	Hardware	3 years	Replaced by Juniper Switches ASAP
Switches	Juniper	EX2200		Future	2016	2020	Hardware	7 years	Tech refresh of LAN during Contract
Switches	Juniper	EX3300		Future	2016	2020	Hardware	7 years	Tech refresh of LAN during Contract
Switches	Juniper	EX4300		Future	2016	2020	Hardware	7 years	Tech refresh of LAN during Contract
Switches	Juniper	EX4600		Future	2016	2020	Hardware	7 years	Tech refresh of LAN during Contract
Switches	Juniper	QFX5100		Future	2016	2020	Hardware	7 years	Tech refresh of LAN during Contract
Switches	Juniper	All		Future	2016	2020	Software	2 years	Junos 'R' Release from Juniper every 2 years
WLAN - Wireless LAN rollout programme									
Wireless Access Point	Aruba	ARU-AP-205		Future	Jan-16	Jan-20	Hardware	5 years	New WAP Rollout programme
Controller	Aruba	ARU-7120		Future	Jan-16	Jan-20	Hardware Appliance	7 years	
Manager	Aruba	ARU-CP-HW-5K		Future	Jan-16	Jan-20	Hardware Appliance	7 years	
ClearPass	Arube	ARU-AW-HW		Future	Jan-16	Jan-20	Hardware Appliance	7 years	
WAN – Part of migration, covered in implementation and then BAU									
Router	Juniper	SRX210		Future	2016	2020	Hardware	7 years	Rolled out during Implementation
Router	Juniper	SRX240		Future	2016	2020	Hardware	7 years	Rolled out during Implementation
Router	Juniper	SRX1400		Future	2016	2020	Hardware	7 years	Rolled out during Implementation
Router	Juniper	SRX5400		Future	2016	2020	Hardware	7 years	Rolled out during Implementation
Router	Juniper	MX104		Future	2016	2020	Hardware	7 years	Part of Core Build
Router	Juniper	MX480		Future	2016	2020	Hardware	7 years	Part of Core build

Router	Juniper	MX960		Future	2016	2020	Hardware	7 years	
Router	Juniper	All		Future	2016	2020	Software	2 years	Junos 'R' Release from Juniper every 2 years
TS laptop	SST	TBD		Future	2016	2020	Hardware	3 years	
CPP	Ericson	Passports		Current	2016	2018	Hardware	N/A	Removal as per migration schedule.
CPP	TimePlex	Timeplex		Current	2016	2018	Hardware	N/A	Removal as per migration schedule.
DNSIP – Covered in implementation									
IPAM	Bluecat	Bluecat BAM-6000		Future	2016	2020	Hardware	7 years	Contractors new IPAM Solution
IPAM	Bluecat	Bluecat S60		Future	2016	2020	Hardware	7 years	Contractors new IPAM Solution
IPAM	Bluecat	Bluecat S45		Future	2016	2020	Hardware	7 years	Contractors new IPAM Solution
IPAM	BT	Diamond IP		Current	2016	2016	Hardware	N/A	Removal as per migration schedule.
Encryption – Part of migration, covered in implementation and then BAU									
Software Encryption	Juniper	All SRX's		Future	2016	2020	Software	2 years	Rolled out during Implementation
Hardware Encryption	L3 TRL	Mini Catapan 701255		Future	2016	2020	Hardware	7 years	Rolled out during Implementation
Hardware Encryption	L3 TRL	Enterprise Catapan 701344		Future	2016	2020	Hardware	7 years	Rolled out during Implementation
Hardware Encryption	L3 TRL	Catapan ATM		Current	2016	2017	Hardware	N/A	Phased out during migration, this solution will go EOL at end of 2016 once key material is no longer available
Config Management	L3 TRL	CDM Manager		Future	2016	2020	Hardware	7 years	Rolled out during Implementation, patch as required
BPS – Covered in implementation									
Firewall	Cisco	ASA 5525		Future	2016	2020	Hardware	7 years	
Firewall	Cisco	ASA 5585-x		Future	2016	2020	Hardware	7 years	
Firewall	Juniper	SRX 240		Future	2016	2020	Hardware	7 years	
Firewall	Juniper	SRX 650		Future	2016	2020	Hardware	7 years	

Gateway	McAfee	Email Gateway EMG-5500-DA		Future	2016	2020	Hardware Appliance	7 years	
Gateway	Deep Secure	Mail Guard SMTP & X400		Future	2016	2020	Software	5 years	Patch as required
Gateway	Websense	X10G		Future	2016	2020	Hardware Appliance	7 years	
Gateway	Websense	V10000		Future	2016	2020	Virtual Machine	7 years	
Server	Sun	XT		Future	2016	2020	Hardware	7 years	
Switch	Isode	M-Switch		Future	2016	2020	Hardware	7 years	
OS	Sun	Solaris Xt10		Future	2016	2020	Software	5 years	Patch as required
Switch	Juniper	EX2200		Future	2016	2020	Hardware	7 years	
Dongle	RSA	SecurID		Future	2016	2020	Hardware	3 years	Replacement every 3 years
Authentication	RSA	RSA Auth Mgr		Future	2016	2020	Software	5 years	Patch as required
Remote Access	Juniper	SSG 6611		Future	2016	2020	Hardware	7 years	CPA approved solution
OS	Juniper	All		Future	2016	2020	Software	2 years	Junos 'R' Release from Juniper every 2 years
ESG	Various	Various		Current	2016	2017	Hardware	N/A	Replace by new solution BPS based on commercial appliances.
Remote Access	AEP	Xkryptor		Current	2016	2017	Hardware	N/A	XKryptor is no longer being developed, has various limitation, To be replace with CPA solution
PPS – Part of migration, covered in implementation and then BAU									
PPS Emulator	Juniper	CTP		Future	2016	2020	Hardware	7 years	Migration of PPS to Emulated PPS to meet Almost everything over IP strategy
Ethernet (Digital)	Various	10 -> 1Gbit/s Base-T		Current	2016	2020	Link	7 years	
Ethernet (Digital)	Various	10 -> 1Gbit/s Base-X		Current	2016	2020	Link	7 years	
Ethernet (Digital)	Various	10 Gbit/s		Current	2016	2020	Link	7 years	
		Base-(TBD)							

Fibre Channel (Digital)	Various	1 and 4Gbit/s		Current	2016	2020	Link	7 years	
Digital	Various	V.11 – 1Mbit/s -> 7.68Mbit/s		Current	2016	2020	Link	None	Replaced by CTP emulation
Digital	Various	Piesiochronous G.703 2 and 34Mbit/s		Current	2016	2020	Link	None	8Mbit/s is not available, replaced by IP, Emulation or SDH
Digital	Various	T1 – 1.55Mbit/s		Current	2016	2018	Link	None	Replaced by MPLS and IP solution
Digital	Various	T3 – 45Mbit/s		Current	2016	2018	Link	None	Replaced by MPLS and IP solution
ATM (Digital)	Various	Piesiochronous G.703 2 and 34Mbit/s		Current	2016	2017	Link	None	Replaced by MPLS and IP solution
ATM (Digital)	Various	Synchronous STM-1 optical G957 SC connector 155Mbit/s		Current	2016	2017	Link	None	Replaced by MPLS and IP solution
ATM (Digital)	Various	Synchronous STM-4 optical G957 SC connector 622Mbit/s		Current	2016	2017	Link	None	Replaced by MPLS and IP solution
Config Management	Juniper	CTP View		Future	2016	2020	Software	7 years	Patch as required
OS	Juniper	All		Future	2016	2020	Software	2 years	Junos 'R' Release from Juniper every 2 years
Cyber Access – Part of migration, covered in implementation and then BAU									
Content Inspection	McAfee	CSSICE-AA-AA		Future	2016	2020	Hardware	5 years	Part of the BPS solution, Patching as required
Cyber Access									Define by Watch tower
Buffer	Endace	7xxx		Current	2016	2020	Hardware Appliance	5 years	Reuse of current 7xxx in estae plus addition devices
Buffer	Endace	3xxx		Future	2016	2020	Hardware Appliance	5 years	New devices for each site

Service & Monitoring Tools – Covered in implementation									
Virtualisation farm	Fujitsu	vShape 200 HA		Future	2016	2020	Hardware	5 years	VMWare virtualisation farm to run service and network monitoring tools
Virtualisation	VMware	VSphere		Future	2016	2020	Software	2 years	Patching as required
OS	Microsoft	Windows 2012 Data Centre		Future	2016	2020	Software	5 years	Patching as required
Service Desk	CA	Service Desk X>XX		Future	2016	2020	Software	5 years	Contractor Service Desk
Database	Microsoft	SQL		Future	2016	2020	Software	5 years	Patching as required
Polling	EMC	EMC Smarts		Future	2016	2020	Software	5 years	Patching as required
Performance	SevOne	PAS		Future	2016	2020	Hardware Appliance	5 years	Patching as required
Orchestration	TD Fusion	Federos		Future	2016	2020	Software	5 years	Patching as required
Authentication	Cisco	ACS		Future	2016	2020	Hardware Appliance	5 years	Patching as required
NTP	Meinburg	LANTIME M300		Future	2016	2020	Hardware Appliance	5 years	Patching as required
TDM-Sync				Future	2016	2020	Hardware Appliance	5 years	Patching as required

APPENDIX 2
PROCUREMENT PLAN

Make	Model	Supporting Service	Supporting activity (i.e. Implementation, technology refresh or business as usual delivery of the Service(s))	Intended procurement route	Cost	Delivery lead time	Financial Year during which procurement is to occur
Fujitsu vShape	vShape 200 HA	Service Management + Network Mgmt Tools	Implementation	Fujitsu		30 Days	2015
Fujitsu RX	RX200S7	BPS Infrastructure	Implementation	Fujitsu		30 days	2015
Juniper SRX	110H2-VA	Connectivity	Implementation	Fujitsu		30 days	2015
Juniper SRX	210HE2	Connectivity	Implementation	Fujitsu		30 days	2015 -> 2017
Juniper SRX	240H2	Connectivity	Implementation	Fujitsu		30 days	2015 -> 2017
Juniper SRX	1400	Connectivity	Implementation	Fujitsu		30 days	2015 -> 2017
Juniper SRX	5400	Connectivity	Implementation	Fujitsu		30 days	2015
Juniper MX	104	Connectivity	Implementation	Fujitsu		30 days	2015
Juniper MX	480	Connectivity	Implementation	Fujitsu		30 days	2015

Make	Model	Supporting Service	Supporting activity (i.e. Implementation, technology refresh or business as usual delivery of the Service(s))	Intended procurement route	Cost	Delivery lead time	Financial Year during which procurement is to occur
Juniper MX	960	Connectivity	Implementation	Fujitsu		30 days	2015
L3 TRL Mini CATAPAN	701255	Connectivity	Implementation	Fujitsu		30 days	2015 -> 2017
L3 TRL Mini CATAPAN	701344	Connectivity	Implementation	Fujitsu		30 days	2015 -> 2017
Juniper CTP	2008	PPS	Implementation	Fujitsu		30 days	2015 -> 2017
Juniper CTP	2024	PPS	Implementation	Fujitsu		30 days	2015 -> 2017
Juniper CTP	2056	PPS	Implementation	Fujitsu		30 days	2015 -> 2017
Juniper EX	4600	Connectivity	Implementation	Fujitsu		30 days	2015
BlueCat IPAM	6000	DNSIP	Implementation	Fujitsu		30 days	2015
BlueCat IPAM	3000	DNSIP	Implementation	Fujitsu		30 days	2015
BlueCat DNS + DHCP	S60	DNSIP	Implementation	Fujitsu		30 days	2015
BlueCat DNS + DHCP	S45	DNSIP	Implementation	Fujitsu		30 days	2015
BlueCat	Automation	DNSIP	Implementation	Fujitsu		30 days	2015

Make	Model	Supporting Service	Supporting activity (i.e. Implementation, technology refresh or business as usual delivery of the Service(s))	Intended procurement route	Cost	Delivery lead time	Financial Year during which procurement is to occur
Endace	EP7000-CMS	Cyber Access	Implementation	Fujitsu		30 days	2015 -> 2017
Endace	EP-304	Cyber Access	Implementation	Fujitsu		30 days	2015 -> 2017
McAfee Content Security	CSSICE-AA-AA	Cyber Access	Implementation	Fujitsu		30 days	2015
Cisco ASA	5525	BPS	Implementation	Fujitsu		30 days	2015
Cisco ASA	5585-X	BPS	Implementation	Fujitsu		30 days	2015
Deep Secure	Mail Guard (SMTP & X400	SECRET BPS	Implementation	Fujitsu		30 days	2015
ISode	M-Switch	SECRET BPS	Implementation	Fujitsu		30 days	2015
Isode	M-Switch Mixer	SECRET BPS	Implementation	Fujitsu		30 days	2015
McAfee Email Gateway	EMG-5500-DA	BPS	Implementation	Fujitsu		30 days	2015
Deep-Secure Network Management Guard licences	L-NET-B3	BPS	Implementation	Fujitsu		30 days	2015
Sun Server	?????	BPS	Implementation	Fujitsu		30 days	2015

Make	Model	Supporting Service	Supporting activity (i.e. Implementation, technology refresh or business as usual delivery of the Service(s))	Intended procurement route	Cost	Delivery lead time	Financial Year during which procurement is to occur
Cisco Switch Fibre	WS-C3750X-48PF-S	BPS	Implementation	Fujitsu		30 days	2015
Websense V10000	V10KG3-X-XX00-N	BPS	Implementation	Fujitsu		30 days	2015
Websense X10G Base Chassis	X10G-X-XX00-N	BPS	Implementation	Fujitsu		30 days	2015
X10G Blades	X10GBR2-X-XX00-N	BPS	Implementation	Fujitsu		30 days	2015
X10G optical kit	X10GOPT-X-XX00-N	BPS	Implementation	Fujitsu		30 days	2015
E-mail Security Gateway per account	ESGA-R-CP60-N	BPS	Implementation	Fujitsu		30 days	2015
Web Security Gateway per account	WSGA-R- CP60-N	BPS	Implementation	Fujitsu		30 days	2015
Juniper SRX	240	BPS	Implementation	Fujitsu		30 days	2015
Juniper SRX	650	BPS	Implementation	Fujitsu		30 days	2015

Make	Model	Supporting Service	Supporting activity (i.e. Implementation, technology refresh or business as usual delivery of the Service(s))	Intended procurement route	Cost	Delivery lead time	Financial Year during which procurement is to occur
Juniper Pulse Gateway	6611	BPS Remote Access	Implementation	Fujitsu		30 days	2015
RSA SID	SID700-6-60-36-G	BPS Remote Access	Implementation	Fujitsu		30 days	2015
RSA Auth Mgr	AUT0050000B8	BPS Remote Access	Implementation	Fujitsu		30 days	2015
Juniper EX	2200-48P-4G	WiFi LAN	New requirement	Fujitsu		30 days	2016-2019
ARUBA	ARU-7210	WiFi LAN	New requirement	Fujitsu		30 days	2016-2019
ARUBA	ARU-CP-HW-5K	WiFi LAN	New requirement	Fujitsu		30 days	2016-2019
ARUBA	ARU-AP-205	WiFi LAN	New requirement	Fujitsu		30 days	2016-2019
ARUBA	ARU-AW-HW	WiFi LAN	New requirement	Fujitsu		30 days	2016-2019
Juniper EX	2200-24T-4G	LAN	Tech Refresh	Fujitsu		30 days	2015-2019
Juniper EX	4800-48T-4G	LAN	Tech Refresh	Fujitsu		30 days	2015-2019
Juniper EX	3300-48T	LAN	Tech Refresh	Fujitsu		30 days	2015-2019
Juniper EX	4300-32F	LAN	Tech Refresh	Fujitsu		30 days	2015-2019
Juniper EX	4600-40F-AFO	LAN	Tech Refresh	Fujitsu		30 days	2015-2019

Make	Model	Supporting Service	Supporting activity (i.e. Implementation, technology refresh or business as usual delivery of the Service(s))	Intended procurement route	Cost	Delivery lead time	Financial Year during which procurement is to occur
Juniper QFX	5100-48S-3AFO	LAN	Tech Refresh	Fujitsu		30 days	2015-2019
Juniper QFX	5100-96S-AFO	LAN	Tech Refresh	Fujitsu		30 days	2015-2019
SST Tempested Laptop		Connectivity	Implementation	Fujitsu		30 days	2015-2017
Meinberg NTP	LANTIME M300 GPS	Common	Implementation	Fujitsu		30 days	2015
Federos	Unified Service Manager	Common	Implementation	Fujitsu		30 days	2015
EMC	NCM	Common	Implementation	Fujitsu		30 days	2015
EMC	Smarts	Common	Implementation	Fujitsu		30 days	2015
EMC	Smarts MPLS	Common	Implementation	Fujitsu		30 days	2015
EMC	Smarts NPM	Common	Implementation	Fujitsu		30 days	2015
EMC	Notification Manager	Common	Implementation	Fujitsu		30 days	2015
SevOne	PAS200K	Common	Implementation	Fujitsu		30 days	2015
SevOne	PAS60K	Common	Implementation	Fujitsu		30 days	2015

Make	Model	Supporting Service	Supporting activity (i.e. Implementation, technology refresh or business as usual delivery of the Service(s))	Intended procurement route	Cost	Delivery lead time	Financial Year during which procurement is to occur
SevOne	HSA200K	Common	Implementation	Fujitsu		30 days	2015
SevOne	HAS60K	Common	Implementation	Fujitsu		30 days	2015
SevOne	DNC1000HF	Common	Implementation	Fujitsu		30 days	2015
Avocent term Server	ACS 5032	Common	Implementation	Fujitsu		30 days	2015
Avocent term Server	ACS 5008	Common	Implementation	Fujitsu		30 days	2015
CA	Service Desk	Common	Implementation	Fujitsu		30 days	2015
AEP	High Grade Crypto Keep	Common	Implementation	Fujitsu		30 days	2015