

DMPC Decision – PCD 1402

Title: F5 (Load Balancers) Implementation/Replacement

Executive Summary:

This decision relates to the procurement and implementation of the replacement to the existing load balancer (f5) hardware within the MPS.

Load balancers are a critical component of the MPS' IT infrastructure, providing mechanisms to distribute load across several appliances in order to meet performance requirements and also in the provision of resilience to ensure service continuity in the event of a single component failure.

The current f5 estate is shortly to reach End of Software Support Life (EoSSL) and requires replacement in order to remain fully supported.

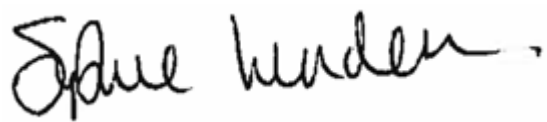
Recommendation:

The Deputy Mayor for Policing and Crime is recommended to approve capital expenditure of £1,183,000 for the replacement of the existing f5 legacy estate under a modern hybrid licencing model (HELA) better aligned to the MPS Digital Policing infrastructure strategy.

Deputy Mayor for Policing and Crime

I confirm I have considered whether or not I have any personal or prejudicial interest in this matter and take the proposed decision in compliance with the Code of Conduct. Any such interests are recorded below.

The above request has my approval.

Signature 

Date 25/11/2021

PART I - NON-CONFIDENTIAL FACTS AND ADVICE TO THE DMPC

1. Introduction and background

- 1.1. The MPS load balancer (f5) estate is duplicated in two MPS data centres (Eagle and Hawk), as part of the MPS' Secure External Gateway (MSEG) deployed in a service resilient design.
- 1.2. There are a number of f5 devices in the MPS Estate that are at end of software support.
- 1.3. The requirement to replace the existing f5 platform is driven by the current f5 hardware and software in use within the MPS going End of Life (EoL). After this point the f5 manufacturer do not provide security updates or hotfixes to the software as part of their normal service. The software will move into extended support, during which they will offer "reasonable effort" technical support and on occasion may offer a customer access to certain software updates which may include security or stability-related software releases. This extended support will continue until 2025.
- 1.4. In view of the criticality of the services that the MPS' f5 estate provides to both staff and front-line policing it is not desirable that support be limited to just "reasonable effort" by the manufacturer. The MPS requires that such critical devices be current within the manufacturer's model range and fully supported.

2. Issues for consideration

- 2.1. Load balancers are a critical component of the MPS' IT infrastructure, providing mechanisms to distribute load across several appliances in order to meet performance requirements and also in the provision of resilience to ensure service continuity in the event of a single component failure.
- 2.2. Ongoing revenue cost of £280k per annum from 2022/23 will be funded from the MOPAC Approved DP Networks Revenue Budget.
- 2.3. The F5 estate within MPS provides the internal and external primary load balancing capabilities key to providing the critical services that all MPS officers and staff use, directly and indirectly.
- 2.4. This approach also enables MPS to remove the use of Cisco GSS load balancers from the MPS estate and to standardise load balancing capability under the new F5 environment, reducing operational expenditure, risk and the need to retain expertise with respect to these legacy Cisco devices.
- 2.5. The new F5 high performance devices will be delivered under a new Hybrid Enterprise License Agreement (HELA). This will enable future planned migration to a more agile, flexible and consumption-based usage model in the future.

- 2.6. An IT Health Check (ITHC) will be undertaken by BT as part of the delivery of the proposed solution.

3. Financial Comments

- 3.1. The capital cost of £1.183m is to be funded from MOPAC Approved Digital Policing Capital Budget in 2021/22.
- 3.2. Revenue costs of an additional £280k per annum from 22/23 onwards will be funded from the MOPAC Approved DP Networks Revenue Budget.

4. Legal Comments

- 4.1. The Mayor's Office for Policing and Crime (MOPAC) is a contracting authority as defined in the Public Contracts Regulations 2015 (the Regulations). All awards of public contracts for goods and/or services in excess of £189,330 shall be procured in accordance with the Regulations.
- 4.2. This report confirms that the proposed works orders with BT and Keysource are to be procured through the MOPAC's Networks and Service Integration and Application Management 'Tower' contracts respectively. The report also confirms the technical and financial scope of the proposed orders are within the respective 'Tower' contracts.
- 4.3. Directorate of Legal Services confirms that on the basis of the information provided in the report the extension of this service is in accordance with Public Contract Regulation 72(1) (b): Economic or technical reasons.
- 4.4. Paragraph 7.23 of the MOPAC Scheme of Delegation and Consent provides that the Director of Strategic Procurement has delegated authority to approve the award of all contracts, with the exception of those called in through the agreed call in procedure. Paragraph 4.14 of the Scheme provides the Deputy Mayor for Policing and Crime reserves the right to call in any MPS proposal to award a contract for £500,000 or above.

5. Commercial Issues

- 5.1. Procurement will be through the existing Networks Tower Supplier BT under the terms of the Tower contract remaining in effect until March 2022, and assured to be conformant under that contract.
- 5.2. This solution:
- Provides lower device and licensing costs for additional future MPS needs under the HELA cost model.

- Enables the migration of licenses to virtualised deployments in the future as software is not locked to the underlying hardware / device, in alignment with MPS infrastructure strategy.
- Delivers a more agile and commercially efficient scalability to absorb additional MPS F5 future requirements.

6. GDPR and Data Privacy

- 6.1. As this paper relates to infrastructure services only, and in particular communications infrastructure not concerned with data “at rest”, there are no special privacy or GDPR considerations applicable.
- 6.2. The MPS is subject to the requirements and conditions placed on it as a 'State' body to comply with the European Convention of Human Rights and the Data Protection Act (DPA) 2018. Both legislative requirements place an obligation on the MPS to process personal data fairly and lawfully in order to safeguard the rights and freedoms of individuals.
- 6.3. Under Article 35 of the General Data Protection Regulation (GDPR) and Section 57 of the DPA 2018, Data Protection Impact Assessments (DPIA) become mandatory for organisations with technologies and processes that are likely to result in a high risk to the rights of the data subjects.
- 6.4. The Information Assurance and Information Rights units within MPS will be consulted at all stages to ensure the project meets its compliance requirements.

7. Equality Comments

- 7.1. There are no adverse implications to Equality and Diversity through the approval of this recommendation.
- 7.2. This is a development of/replacement to an existing service as a consequence of which this work does not change aspects relating to equality or diversity.

8. Background/supporting papers

- 8.1. Report

Public access to information

Information in this form (Part 1) is subject to the Freedom of Information Act 2000 (FOIA) and will be made available on the MOPAC website following approval.

If immediate publication risks compromising the implementation of the decision it can be deferred until a specific date. Deferral periods should be kept to the shortest length strictly necessary.

Part 1 Deferral:

Is the publication of Part 1 of this approval to be deferred? NO

If yes, for what reason:

Until what date:

Part 2 Confidentiality: Only the facts or advice considered as likely to be exempt from disclosure under the FOIA should be in the separate Part 2 form, together with the legal rationale for non-publication.

Is there a **Part 2** form – YES

ORIGINATING OFFICER DECLARATION

Tick to confirm statement (✓)

Financial Advice:

The Strategic Finance and Resource Management Team has been consulted on this proposal.

✓

Legal Advice:

The MPS legal team has been consulted on the proposal.

✓

Equalities Advice:

Equality and diversity issues are covered in the body of the report.

✓

Commercial Issues

The proposal is in keeping with the GLA Group Responsible Procurement Policy.

✓

GDPR/Data Privacy

- GDPR compliance issues are covered in the body of the report.
- A DPIA is not required.

✓

Drafting Officer

Craig James has drafted this report in accordance with MOPAC procedures.

✓

Director/Head of Service:

The Chief Finance Officer has reviewed the request and is satisfied it is correct and consistent with the MOPAC's plans and priorities.

✓

Chief Executive Officer

I have been consulted about the proposal and confirm that financial, legal and equalities advice has been taken into account in the preparation of this report. I am satisfied that this is an appropriate request to be submitted to the Deputy Mayor for Policing and Crime.

Signature



Date 25/11/2021



f5 (Load Balancers) Implementation/Replacement

MOPAC Investment Advisory & Monitoring meeting 31st August 2021

Report on behalf of the Chief of Corporate Services

Part 1 – This section of the report will be published by MOPAC. It is classified as OFFICIAL – PUBLIC

EXECUTIVE SUMMARY

This paper refers to the procurement & implementation of the replacement to the existing load balancer (f5) hardware within the MPS.

F5 load balancers are a critical component of the MPS' IT infrastructure, providing mechanisms to distribute load across several appliances in order to meet performance requirements and also in the provision of resilience to ensure service continuity in the event of a single component failure.

The current f5 estate is shortly to reach End of Software Support Life (EoSSL) and requires replacement in order to remain fully supported.

Recommendations

The Deputy Mayor for Policing and Crime, via the Investment Advisory and Monitoring meeting (IAM), is asked to:

- 1. Approve capital expenditure of £1,183k to fund the replacement of the existing f5 legacy estate under a modern hybrid licencing model (HELA) better aligned to MPS Digital Policing infrastructure strategy**

Time sensitivity

A decision is required from the Deputy Mayor by 11/09/2021. This is to:

- a) Ensure orders can be placed in time to avoid risks associated with the EoSSL dates of the existing infrastructure;
- b) Enable the MPS to adopt the HELA licence model which facilitates deployment of some urgent tactical load balancer capability for the new Condor datacentre without incurring commercial penalty;
- c) Secure substantial discounts that have been offered by the manufacturer f5 as an inducement to adopt the HELA licencing model and procure suitable infrastructure and software licences by the end of their trading year – September.

Non-confidential facts and advice to the Deputy Mayor for Policing and Crime

Introduction and background

1. The MPS f5 estate is duplicated in two MPS data centres (Eagle and Hawk), as part of the MPS' Secure External Gateway (MSEG) deployed in a service resilient design.
2. There are a number of f5 devices in the Met Estate that are at end of software support.
3. The requirement to replace the existing f5 platform is driven by the current f5 hardware and software in use within the MPS going End of Life (EoL). After this point the f5 manufacturer do not provide security updates or hotfixes to the software as part of their normal service. The software will move into extended support, during which they will offer "reasonable effort" technical support and on occasion may offer a customer access to certain software updates which may include security or stability-related software releases. This extended support will continue until 2025.
4. In view of the criticality of the services that the MPS' f5 estate provides to both staff and front-line policing it is not desirable that support be limited to just "reasonable effort" by the manufacturer. The MPS requires that such critical devices be current within the manufacturer's model range and fully supported.

Issues for consideration

1. F5 load balancers are a critical component of the MPS' IT infrastructure, providing mechanisms to distribute load across several appliances in order to meet performance requirements and also in the provision of resilience to ensure service continuity in the event of a single component failure.
2. Ongoing revenue cost of £280k per annum from 2022/23 will be funded from the MOPAC Approved DP Networks Revenue Budget.
3. The f5 estate within MPS provides the internal and external primary load balancing capabilities key to providing the critical services that all MPS officers and staff use, directly and indirectly.
4. This approach also enables MPS to remove the use of Cisco GSS load balancers from the MPS estate and to standardise load balancing capability under the new f5 environment, reducing operational expenditure, risk and the need to retain expertise with respect to these legacy Cisco devices.
5. The new f5 high performance devices will be delivered under a new Hybrid Enterprise License Agreement (HELA). This will enable future planned migration to a more agile, flexible and consumption-based usage model in the future.
6. There is no GDPR impact.

7. An IT Health Check (ITHC) will be undertaken by BT as part of the delivery of the proposed solution.
8. There are considered to be no negative equality or diversity implications arising from this request.
9. There are no environmental implications associated with this request.

Contributes to the MOPAC Police & Crime Plan 2017-2021¹

1. f5 load balancer infrastructure is critical to normal stable and resilient operations and helps to ensure that officers and staff of the MPS have use of the digital equipment they need to operate effectively in modern London, as pledged in the MOPAC Police & Crime Plan 2017-2021

Financial, Commercial and Procurement Comments

1. To be funded from MOPAC Approved Digital Policing Capital Budget in 2021/22
2. Provides lower device and licensing costs for additional future MPS needs under the HELA cost model.
3. Enables the migration of licenses to virtualised deployments in the future as software is not locked to underlying hardware / device, in alignment with MPS infrastructure strategy.
4. Delivers a more agile and commercially efficient scalability to absorb additional MPS f5 future requirements.
5. Capital Cost: £1,183k
6. Revenue costs: an additional £280k per annum from H2 22/23 onwards.
7. To be procured with existing Networks Tower Supplier BT under the terms of the Tower contract remaining in effect until March 2022, and assured to be conformant under that contract.

Legal Comments

1. The Mayor's Office for Policing and Crime (MOPAC) is a contracting authority as defined in the Public Contracts Regulations 2015 (the Regulations). All awards of public contracts for goods and/or services in excess of £189,330 shall be procured in accordance with the Regulations.
2. Section 4 of this report confirms that the proposed works orders with BT and Keysource are to be procured through the MOPAC's Networks and Service Integration and Application Management 'Tower' contracts respectively. Section 4 also confirms the technical and financial scope of the proposed orders are within the respective 'Tower' contracts.

¹ [Police and crime plan: a safer city for all Londoners | London City Hall](#)

3. Directorate of Legal Services confirms that on the basis of the information provided in this report the extension of this service is in accordance with Public Contract Regulation 72(1) (b): Economic or technical reasons
4. Paragraph 7.23 of the MOPAC Scheme of Delegation and Consent provides that the Director of Strategic Procurement has delegated authority to approve the award of all contracts, with the exception of those called in through the agreed call in procedure. Paragraph 4.14 of the Scheme provides the Deputy Mayor for Policing and Crime reserves the right to call in any MPS proposal to award a contract for £500,000 or above.

Equality Comments

5. There are no adverse implications to Equality and Diversity through the approval of this recommendation.
6. This is a development of/replacement to an existing service as a consequence of which this work does not change aspects relating to equality or diversity.

Privacy Comments

1. As this paper relates to infrastructure services only, and in particular communications infrastructure not concerned with data “at rest”, there are no special privacy or GDPR considerations applicable.
2. The MPS is subject to the requirements and conditions placed on it as a 'State' body to comply with the European Convention of Human Rights and the Data Protection Act (DPA) 2018. Both legislative requirements place an obligation on the MPS to process personal data fairly and lawfully in order to safeguard the rights and freedoms of individuals.
3. Under Article 35 of the General Data Protection Regulation (GDPR) and Section 57 of the DPA 2018, Data Protection Impact Assessments (DPIA) become mandatory for organisations with technologies and processes that are likely to result in a high risk to the rights of the data subjects.
4. The Information Assurance and Information Rights units within MPS will be consulted at all stages to ensure the project meets its compliance requirements.

Real Estate Implications

1. There are no known Real Estate Implications resulting from this recommendation.

Environmental Implications

1. Whilst there are no direct benefits arising from these recommendations to the Mayor's London Environment Strategy², enabling infrastructure services generally to make use of shared virtualised infrastructure, as this paper provides for, does contribute to better monitoring, a clearer understanding of energy consumption and improved control allowing for reduced energy wastage.

Background/supporting papers

Report author: (Tony Cutlan, Head of Hosting and Datacentres, Digital Policing)

Part 2 – This section refers to the details of the Part 2 business case which is NOT SUITABLE for MOPAC Publication.

The Government Security Classification marking for Part 2 is:
OFFICIAL-SENSITIVE [COMMERCIAL]

1. The Business Justification Paper is included in Part 2 (separate attachment) and is exempt from publication for the following reasons:
 - a. Part 2 is exempt under Article 2(2)(a) of the Elected Local Policing Bodies (Specified Information Order 2011) (Data Protection Section 43 – Commercial Interests).
 - b. The FOIA that would exempt this information disclosure is:

Section 1 - Decisions required - page 3. (Section 43 – Commercial and Law enforcement - Section 31)

Section 2 - Strategic Case – from page 4 - Entire page (Law enforcement - Section 31) page 3 Options table (Section 43 – Commercial)

Section 3 - Economic Case – from page 7 - (Section 43 – Commercial and Law enforcement - Section 31)

Section 4 - Commercial Case – from page 9 - (Section 43 – Commercial and Law enforcement - Section 31)

Section 5 - Financial Case - page 11 - para 3,4 and 5 (Law enforcement - Section 31)

Section 6 - Management Case – from page 12 (Section 43 – Commercial)

The paper will cease to be exempt 24 months after the expiry of the contract term, i.e. 30th September 2023.

² <https://www.london.gov.uk/WHAT-WE-DO/environment/environment-publications/draft-london-environment-strategy>