



Portfolio Holder Report

The portfolio holder will make a decision on this item after seven days have elapsed (including the date of publication).

Report of:	Portfolio Holder	Date of publication
Marianne Hesketh, Corporate Director Communities	Councillor Alan Vincent, Resources Portfolio Holder	18 June 2020

Replacing our core IT network infrastructure

1. Purpose of report

- 1.1 To seek approval for the purchase of replacement server network connectivity technologies so that the council's IT infrastructure is modern, future-proof and flexible.

2. Outcomes

- 2.1 An efficient, stable and secure core IT network at the Civic Centre and satellite sites ensuring that the council's current and future networking requirements for the next 10 years are met.
- 2.2 Deliver our Digital Wyre Strategy and efficiencies.

3. Recommendations

- 3.1 That approval is given to proceed with the purchase of the replacement core server networking infrastructure.
- 3.2 That the scheme, costing £249,257 is added to the council's Capital Programme for 2020/21 funded from the IT Reserve.

4. Background

- 4.1 There are two key areas that this proposal will address:
 - Firewall management and internet connectivity, and;
 - Insecure and obsolete core network and edge switches.

Definition;

Core – all server network connectivity within the server room.

Edge – network switches based around buildings that allow desktop connectivity.

Switch - is a piece of networking hardware that connects devices on a network by receiving 'packets' of data and forwarding these 'packets' to the destination device.

- 4.2** The primary driver for this network refresh investment is that our network switches within the Civic Centre and at our satellite sites (Fleetwood YMCA, Marine Hall, Fleetwood Market and Market House Studios, Garstang YMCA, Wyre Estuary Country Park, Copse Road depot, Garstang TIC, Café Cove, Thornton Little Theatre) are over 10 years old and have inherent security vulnerabilities that cannot be patched owing to them being end of life.
- 4.3** Improving the Wi-Fi coverage throughout the organisation's key assets and having the ability to upscale this as and when we need to is also something that is driving the need to upgrade and refresh the technology. We have reached the capacity of the current Wi-Fi in terms of licensing and ability to expand. Coverage of Wi-Fi will be improved throughout the Civic Centre providing excellent service in the Members' Lounge, Council Chamber, committee rooms, offices and public spaces.
- 4.4** As an organisation that wants to be digitally enabled and forward thinking our current infrastructure limits our ability to do even the simplest of tasks. We are currently restricted in our ability to deploy modern, dynamic network solutions to help deliver a more robust solution to our users.
- 4.5** We currently procure BT Lancashire Services (BTLS) to provide remote management and configuration of our firewalls and adhere to BTLS processes and procedures. BTLS are currently going through a transitional phase and as a result their purchasing power has significantly diminished (e.g. the contract increase on firewall maintenance is 300%). Our main internet connectivity is provided by BTLS and a range of IP addresses that are used as part of trusted connectivity to various partners. We will migrate all of our connectivity away from BTLS as a result of the proposals in this report.

5. Key issues and proposals

- 5.1** It is proposed that implementation will be completed within two months of purchase and will be delivered as a phased, controlled roll out to ensure minimum impact on the organisation. Device replacement will be planned wherever possible out of hours.
- 5.2** Multiple suppliers have had the opportunity to be considered for the project and each has been given the same project outline and freedom to design a solution that they feel delivers our objectives. They have also been required to provide "value-added" benefits in addition to the key requirements. Each supplier was afforded the same level of access to the site to conduct an audit of the current "as-is".

- 5.3** We have had proposals and quotations from each supplier that was actively engaged. The successful supplier will procure, configure and assist with the implementation of the chosen solution.
- 5.4** Suppliers have been asked to create their proposals with the following distinct sections to allow comparison;
- Hardware
 - Services
 - Year on Year maintenance.
- 5.5** Proposals varied in terms of content, understanding of requirements, overall solution and the value-added/future propositions. Three supplier options have been considered and the preferred option is detailed below.
- 5.6** Our preferred option covers all of the requirements and will provide a robust, forward-thinking solution enabling the council as a whole to become more resilient in its core ICT. The proposed infrastructure centres around Fortinet firewalls. The solution will:
- Replace core network switches
 - Replace edge switches
 - Replace firewalls and bring management of firewalls back in house from BTLS
 - Implement Software Defined Wide Area Network (SDWAN) - technology that uses software-defined networking (SDN) concepts to distribute network traffic across a wide area network (WAN).
- 5.7** This proposed solution also includes a token-based (similar to what we experience in a hotel where access is granted for a set period of time) guest Wi-Fi solution that we can utilise in council assets such as the Civic Centre, Marine Hall, Thornton Little Theatre and Fleetwood Market. This allows guests to register once and seamlessly access Wi-Fi at key buildings.

Benefits of adopting the proposed infrastructure include;

- a) **Flexibility and control** (single point of management, intuitive design and simple enough for novice network users to manage and investigate issues)
- b) **Customisation** (segregate networks, control flows of network traffic with bandwidth limits, guest networks)
- c) **Compliance** (the dashboard tool is effective in supporting the PCI-DSS compliance process, preventing the capture of credit card information and continually running PCI compliance tests on network)
- d) **Security** (the firewall platform offers greater visibility of potential risk, helping the team review its network usage policy and minimise potential breaches. The intuitive and simplistic provisioning of the firewalls removes any scope for basic configuration errors. Costs saving will be made by replacing dedicated site-to-site connections with commercial broadband offerings. Adopting the proposed infrastructure allows us to leverage site-to-site Virtual Private Networks (VPNs) in the cloud

for site-to-site connectivity, putting it in an excellent position to make use of the SDWAN functionality inherent in the Meraki MXs. Self-healing, intelligent VPN connections provide seamless site-to-site connectivity, with all traffic across the council routing back through a central core switch and segmented based on virtual LAN assignments)

- e) **Governance** (vital for any public sector organisation and the dashboard helps the ICT team understand how the network is being used now, while exploring how it can deliver an even better user experience in the future).

5.8 Fortinet is recognised as one of the leading technologies for networking and Wi-Fi. Adopting technology like this provides more opportunities in terms of employee recruitment and also opens the possibility of sharing management of the network/Wi-Fi between different councils. Common Wi-Fi networks between organisations makes it easier to implement shared resource and collaborative working.

5.9 The council already utilises the preferred supplier’s network support services and they have proven to be reliable.

6. Delegated functions

6.1 The matters referred to in this report are considered under the following executive function delegated to the Resources Portfolio Holder (as set out in Part 3 of the council’s constitution): “To consider arrangements for a strategic approach for the Council’s procurement of goods and services.”

Financial and legal implications	
Finance	The scheme will cost £249,257 in year one and this will be funded by the IT reserve. The scheme will be added to the council’s Capital Programme for 2020/21. Annual costs in year’s two to five will be £43,681 and these will be met from savings on the existing ICT revenue budget (6404).
Legal	A contract for the purchase and implementation of the IT equipment will be entered into with the successful supplier which complies with the Council’s Financial Regulations and Financial Procedure Rules. The contract provides us with certainty over a five year period with regards to ongoing support.

Other risks/implications: checklist

If there are significant implications arising from this report on any issues marked with a ✓ below, the report author will have consulted with the appropriate specialist officers on those implications and addressed them in the body of the report. There are no significant implications arising directly from this report, for those issues marked with a x.

risks/implications	✓ / x
community safety	x
equality and diversity	x
sustainability	x
health and safety	x

risks/implications	✓ / x
asset management	x
climate change	x
ICT	✓
data protection	x

Processing Personal Data

In addition to considering data protection along with the other risks/ implications, the report author will need to decide if a 'privacy impact assessment (PIA)' is also required. If the decision(s) recommended in this report will result in the collection and processing of personal data for the first time (i.e. purchase of a new system, a new working arrangement with a third party) a PIA will need to have been completed and signed off by Data Protection Officer before the decision is taken in compliance with the Data Protection Act 2018.

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List of background papers:		
name of document	date	where available for inspection
None		

List of appendices

None

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