



STATEMENT OF WORK

for

Avanti |
Grange Network Refresh



OVERVIEW

Due to continuing success and growth of the business, Avanti Schools Trust (Avanti) is looking to open the Grange Primary School, which requires a brand-new network to be installed.

Avanti has determined that Meraki devices are best suited to provide connectivity, offer the expected level of security and ease of configuration. The focus is on providing wireless connectivity for user devices and resilient internet connectivity, with simplified management and insight into network use and activity. No public-facing services will be hosted on the site, and just a few internal services are offered to the clients as Avanti is predominantly a 'cloud first' organisation.

DESIGN SPECIFICATION

The Avanti team has selected a Meraki network for their business needs, with the following equipment to form the network:

Perimeter Firewall

- 1x MX95, with 10 Years Advanced Security licence

Core Layer Switch

- 1x Meraki MS425-32, with 10 Years Enterprise licence

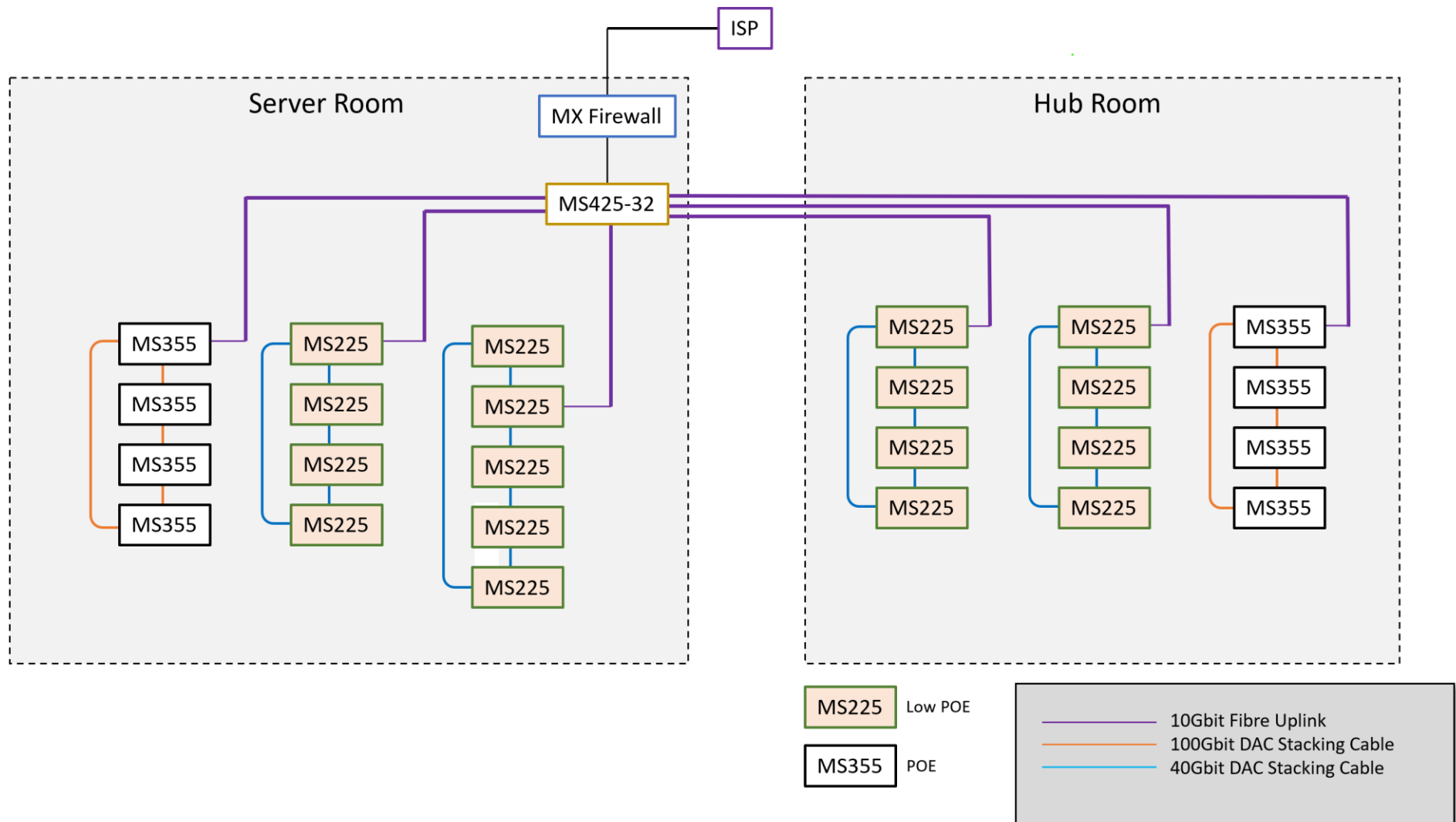
Access Layer Switches

- 8 x Meraki MS355-48X, with 10 Years Enterprise licenses. Four to be installed in the Server Room and four in the Hub Room.
- 17 x Meraki MS225-48LP, with 10 Years Enterprise licenses. Nine to be installed in the Server Room and eight in the Hub Room.

Wireless Access Points

- 76x MR46, with 10 Years Enterprise licenses

The proposed equipment will be deployed as shown in the diagram below.



A single MS425-32 core switch will support fibre and copper uplinks from the stacks of edge switches, both locally in the Server Room cabinet and from the Hub Room cabinet. The uplinks will comprise a single 10 Gbps connection.

The stacks of MS355 access switches will be inter-connected using 100Gbit stack cables and the stacks of MS225 access switches will be inter-connected using 40Gbit stack cables. Uplinks to switches will be formed using 3rd party 10G SFPs.

76x MR46 access points will be installed and connected to the edge switches, taking advantage of the PoE capabilities of the MS355.

DESIGN CONSTRAINTS

- The proposed Meraki MX95 firewall and the MS425-32 Core switch will be deployed as standalone devices, offering no redundancy.
- No additional RADIUS service for wireless user/device authentication will be provided with the proposed solution.

IN SCOPE

As discussed, and agreed with Avanti, ITGL will design, install, test and hand over the Meraki network for the Grange School on a fixed price basis, the scope of which is detailed below.

INITIATION

During initiation a number of key tasks are set in motion:

- Allocation of project resource
- Project governance set up including control log (RAID)
- Project initiation meeting to:
 - Introduce the team
 - Review this statement of work
 - Agree stakeholders and interface expectations
 - Agree project governance including communication requirements and frequency
- Collaborative planning activities

DISCOVERY AND DESIGN

- Design workshop to gather sufficient information to produce a low-level design to be signed off before implementation
- Undertake an on-site WLAN assessment inc “WLAN report”
- RAMS will be provided ahead of any implementation work

IMPLEMENTATION

- Initial remote configuration via the Meraki Dashboard
- Physical installation of the following kit:
 - 1 x Meraki MX95 firewall
 - 1 x Meraki MS425-32 switch
 - 8 x Meraki MS355-48X switches
 - 17 x Meraki MS225-48LP
 - 76x Meraki MR46 access points

 - 8 x MA-CBL-100G-50cm (MS355 stacking cables)
 - 17 x MA-CBL-40G-50cm (MS225 stacking cables)
 - 12 x 3rd Party SFP, equivalent to Meraki MA-SFP-10GB-SR Multi-Mode. (Fibre-optic uplinks from the Hub Room to the MS425-32.)
- Logical configuration of the equipment above
- Supply resources & install 76 x Cat6 cables & outlets within the Avanti Grange Secondary School for new WAPs.

- Supply & install a 21u wall mounted comms cabinet suitable for the WIFI cables & equipment for the Avanti Grange Secondary School.
- Testing of the Meraki network, including:
 - Wireless connectivity
 - Wired connectivity
 - Internet connectivity

GO-LIVE SUPPORT

- Four hours of remote go-live support on the next business day after installation
- Knowledge transfer to the Avanti team throughout the engagement

PROJECT CLOSURE

- Post Live WLAN assessment and follow on “WLAN report”.
- Submission of any final documentation
- Project closure report and sign off request

OUT OF SCOPE

Out of scope items include any tasks not mentioned as being in the scope above, including:

- Structural cabling outside the new wireless cables as per the above list
- Configuration of RADIUS services
- Configuration of internet routers
- Configuration of any VPN tunnel
- Installation and configuration of any equipment beyond the proposed Meraki equipment listed above
- Work outside of normal business hours

SUCCESS CRITERIA

- Solution Acceptance test criteria are met (post-migration testing is successful, switch management access is proven, and resilience testing is successfully completed).
 - Testing of the Meraki network, including:
 - Wireless connectivity
 - Wired connectivity
 - Internet connectivity

ESTIMATED PROJECT DURATION

The project, from initiation to closure, is expected to be completed within 6 weeks, subject to dependencies.

CLIENT RESPONSIBILITIES AND PREREQUISITES

- A single point of contact and escalation to be assigned to work with the ITGL Project Manager and Technical Lead
- Avanti will work with the project team during initiation to agree on communication and reporting requirements and agree on roles and responsibilities and the escalation process.
- Provision of sufficient rack space, and power.
- Provision of cable management and patch leads not listed in the 'in scope section'.
- Management of internal ITIL change requests, representation on change boards and CAB meetings, and communication of any downtime periods.
- Timely provision of information requested.
- Collaboration towards successful design and implementation.
- Development and implementation, in conjunction with ITGL, of a pre and post-service test plan to demonstrate that services are available immediately before and after migration. This is key to demonstrating success and avoiding unnecessary roll-back.
- Provision of internal resources to support any design, implementation, and guide clarification during the appropriate stage.
- Provide a secure location for the storage of equipment until the installation.
- Provide access to comms rooms.
- Creation of a specific test plan

CAVEATS AND ASSUMPTIONS

- We assume there is enough space in the rack to install the new equipment.
- We assume there are enough power sockets available in the rack to connect at least one power supply per switch during the installation and configuration process.
- We assume that the cabinets are secured and lockable.
- We assume that the cabinets and the rooms that they will be situated in have sufficient cooling to prevent over heating of the equipment.
- All changes to time, cost, or quality will be managed via the ITGL change control process.

- Standard working hours are 8.30am to 5.30pm. Any agreed out of hours tasks will be mentioned in the In-Scope section. If unexpected issues or last-minute changes require work in addition to the 8-hour day, additional time will be charged at £120.00 per hour.
- ITGL can deliver the required hardware at least one week before the work commencement date.
- Items delivered in advance will be placed in a secure location and a site contact will be aware and keep details of the location and can escort or provide details to the engineers and consultants upon arrival.
- Management of any third parties or contractors is the responsibility of Avanti unless specifically forming part of the ITGL scope of work.
- Wiring closets and network locations must be accessible with adequate lighting and power.
- It is assumed that all racks are easily accessible from ground level. This proposal does not include any requirement for working at height.
- Labelling of patch cables is out of scope and is the responsibility of Avanti.
- Application migration is not included.

HEALTH AND SAFETY

- It is assumed that ITGL engineers will have complete unobstructed access to all facilities and sites for the duration of the site visit.
- ITGL must be made aware of any health and safety requirements prior to the start of the project.
- Avanti must ensure the working environment of all buildings meets the relevant health and safety standards. If an engineer feels the environment is not safe to start work, they maintain the right to postpone the job until the environment is of a satisfactory standard.
- It is assumed that no site inductions or security briefings are required. If extra time is required to undertake site inductions and assessments, additional professional service time will be required.
- A site representative must be nominated for risk assessment.
- We have assumed that no RAMS are required. Should an onsite risk assessment be required, an additional charge will be applied.

DEPENDENCIES AND CONSTRAINTS

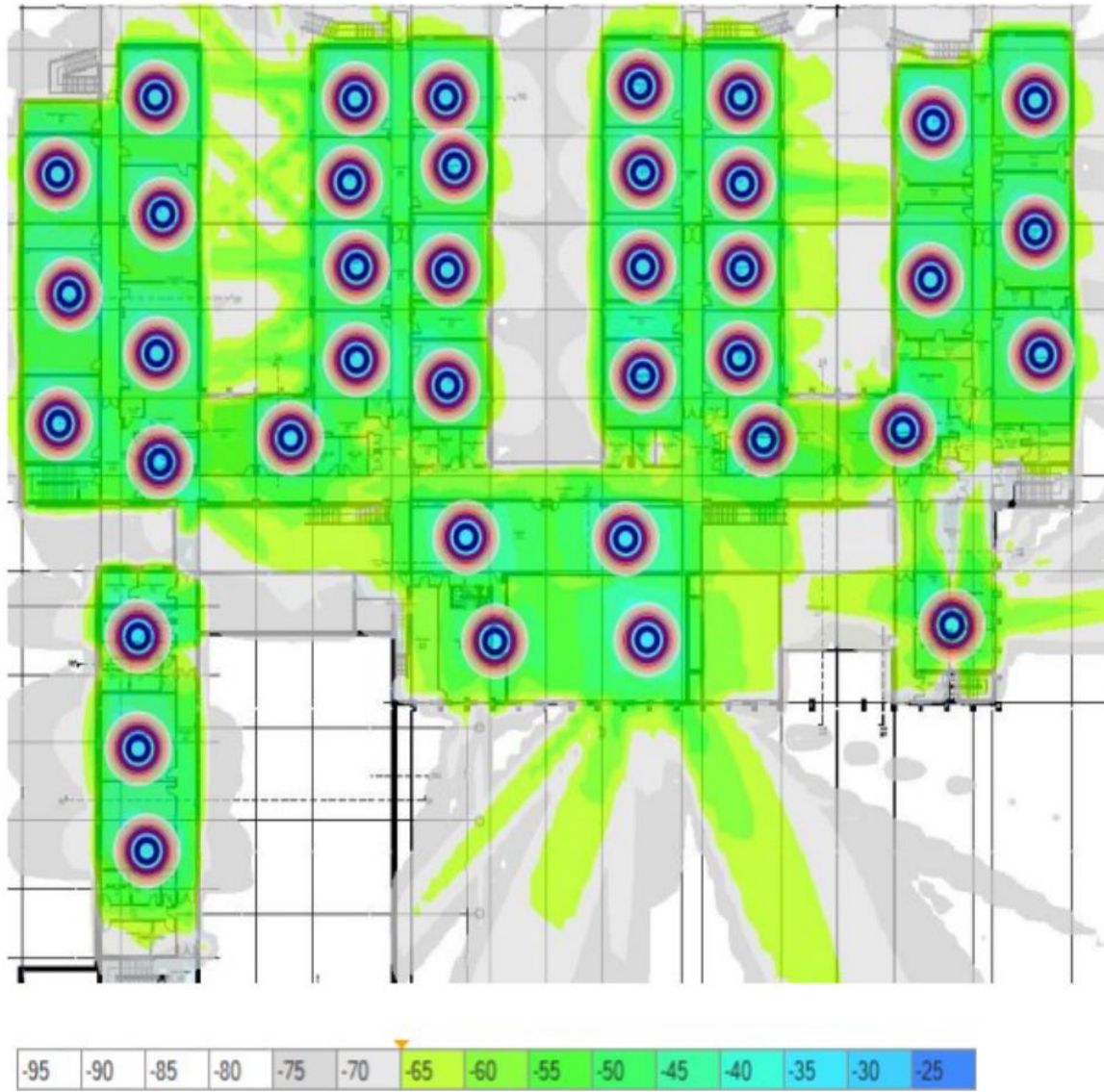
- Delivery of Meraki equipment in time to meet project timelines
- Timely access to all areas of the site to meet project timelines and to ensure efficiency of cabling and AP roll-out

APPENDIX 1 – AP MAP

Ground Floor



First Floor



APPENDIX 2

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