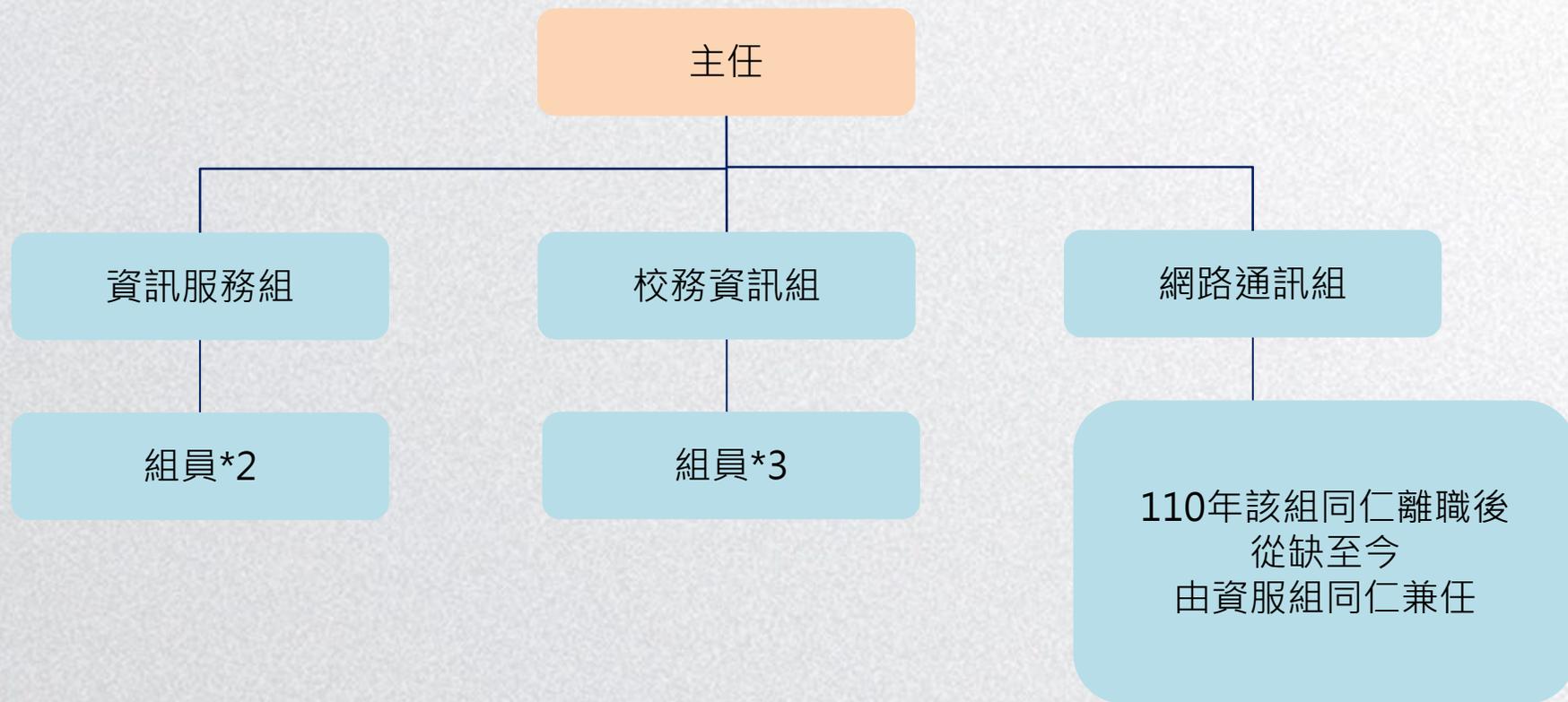


馬偕醫學院

網路管理及建置經驗分享
資訊中心 資服組(兼網通組) 鍾維哲

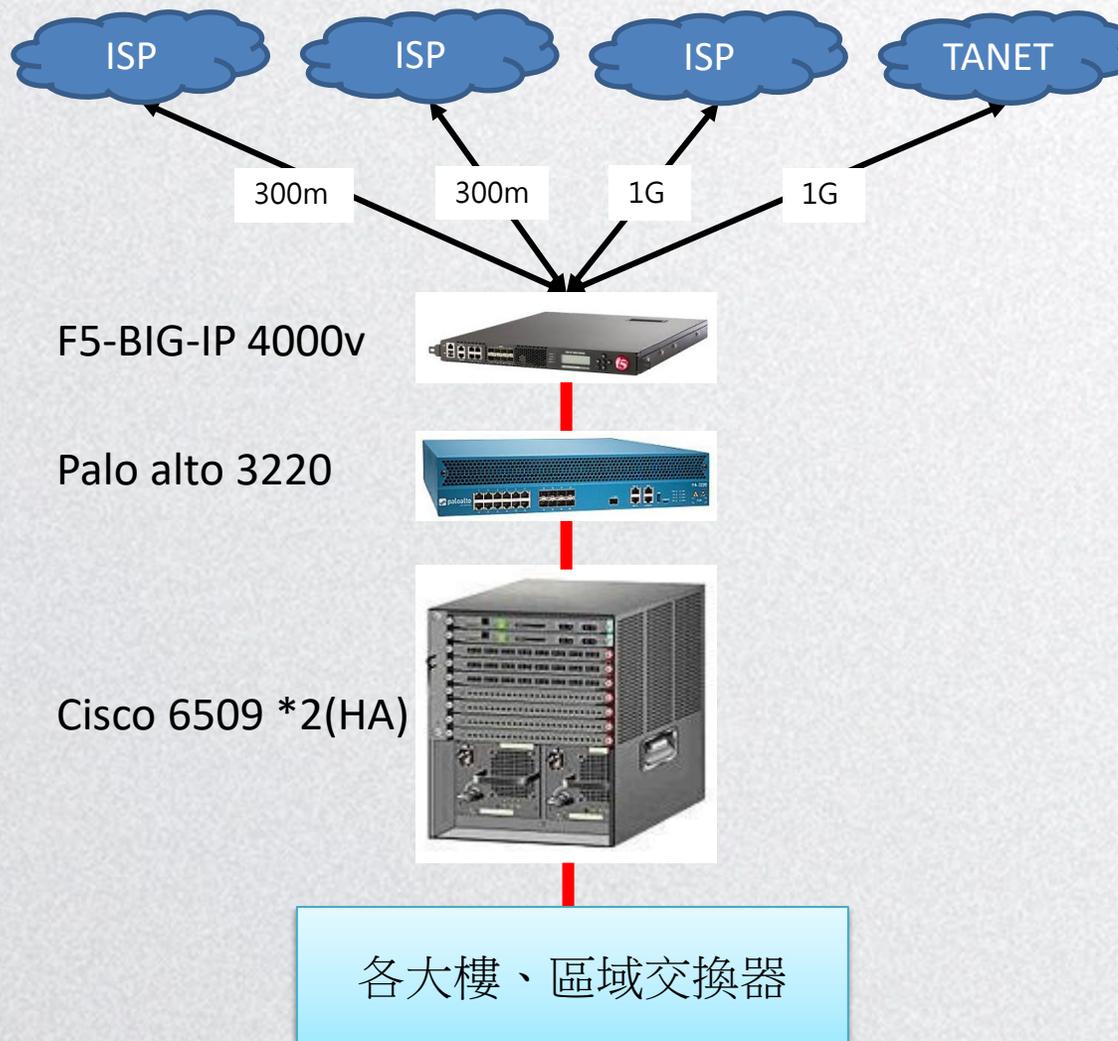


• 資訊中心組織架構





網路架構





• 無線網路

- 原有設備均已eos多年。
- 故於111年開始汰換原有無線網路設備
- 預計112年底完成全面汰換
- 共計2台控制器、98顆無線基地台
 - Aruba 7205
 - Aruba AP-505
- 採用MM、CPPM進行管理
- 認證方式為802.1x



• 網管系統

- 原本使用WhatsUp Gold、但於107年後就沒有更新授權、
- 於111年自行建置LibreNMS

The screenshot displays the LibreNMS dashboard interface. At the top, there is a navigation bar with the LibreNMS logo and menu items: Overview, Devices, Ports, Health, Wireless, Apps, Routing, and Alerts. The user profile shows '64 librenms' and a settings gear icon. Below the navigation bar, there is a 'Dashboards' section with a dropdown menu set to 'Default' and buttons for edit, delete, and add. The main dashboard area is divided into several widgets:

- Top Devices:** A table with columns for 'Device' and 'Traffic', showing traffic graphs for several devices.
- Top Interfaces:** A table titled 'Top 10 interfaces polled within 15 minutes' with columns for 'Device', 'Interface', and 'Total traffic'. It lists interfaces like Et1/6, Et1/5, Gi1/0/1, ge-0/0/1, and ge-0/0/1.0.
- Component Status:** A table with columns for 'Status' and 'Count'. It shows 'Ok' with a count of 0, 'Warning' with a count of 0, and 'Critical' with a count of 0.
- Availability Map:** A widget showing 'Total hosts' with 'up: 117', 'warn: 0', and 'down: 0'. It includes a green progress bar.
- Alerts:** A widget with a search bar, a refresh button, and a dropdown menu. It shows a table with columns for 'Timestamp', 'Rule', 'Hostname', 'Location', 'ACK', and 'Notes'. The current state is 'No results found!'.



現有架構

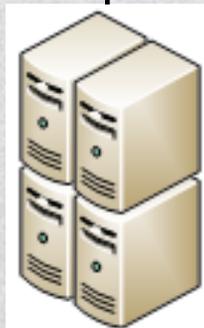
1G Ethernet Switch x 2



10G Ethernet Switch x 1
• Cisco N5K (接C2960)



FC SAN Switch x 2
• DS300B



實體機 約2x台
• 其他應用系統



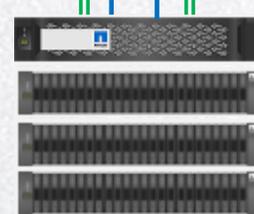
HPE DL380 Gen9 x 2
• Win2016 / SQL2016 (校務資料庫)
• (FC SAN / DS300B)



HPE Blade C7000機箱
BL460c Gen9 x 3
• Hyper-V 2019 x 3
• (FC SAN / DS300B)
BL460c Gen10 x 1
• 未使用



HPE Synergy 12000機箱
SY480 Gen10 x 10
• ESXi Server x 3
• (NFS / N5K)
• CentOS 7 (MariaDB) x 2
• 目前未使用 x 5



NetApp FAS2650 Storage



將於113年2月進行架構調整

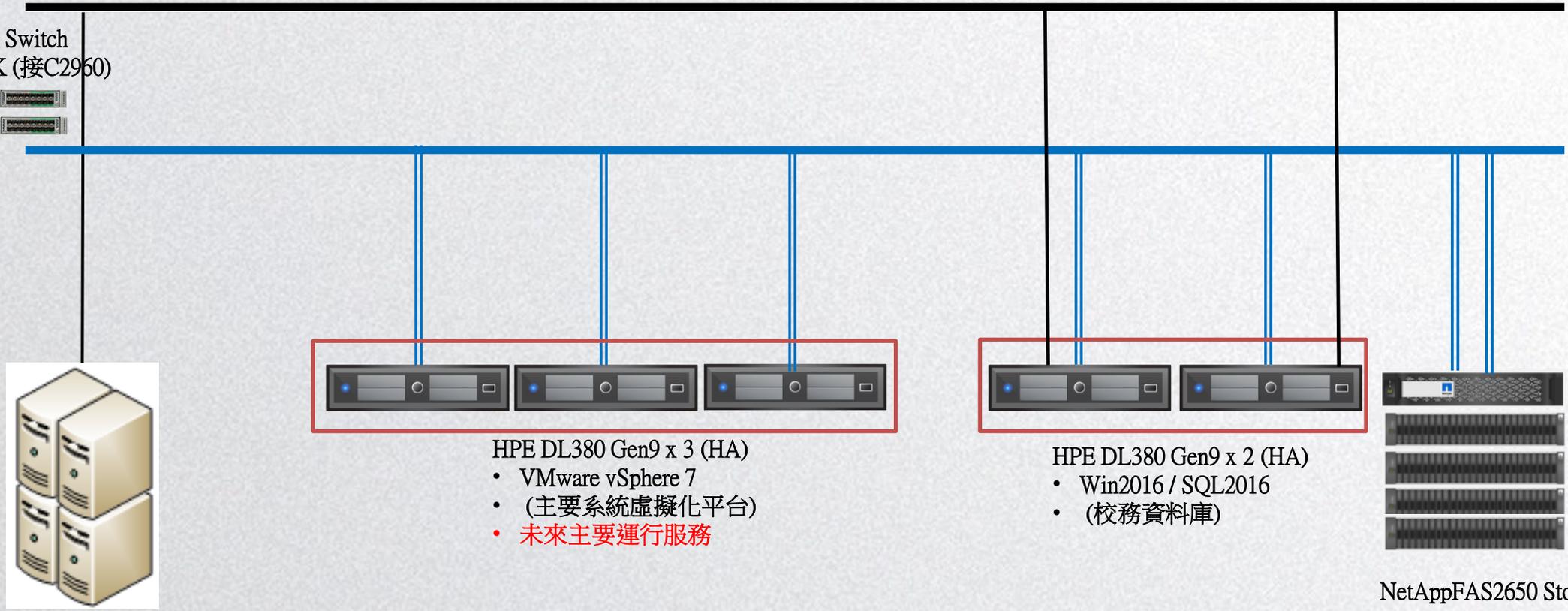
1G Ethernet Switch

- Cisco 2960



10G Ethernet Switch

- Cisco N5K (接C2960)



實體機 x 多台

- 測試
- 等不需要硬體保固的

HPE DL380 Gen9 x 3 (HA)
• VMware vSphere 7
• (主要系統虛擬化平台)
• 未來主要運行服務

HPE DL380 Gen9 x 2 (HA)
• Win2016 / SQL2016
• (校務資料庫)

NetAppFAS2650 Storage



- 電子郵件、網路服務

- 導入 Office 365





- 目前遇到的問題
 - 許多設備皆屆齡，需要汰換
 - 資訊預算短缺
 - 人力短缺