



In Focus

Stellaris upgraded telephone system for Royal United Hospitals Bath

Believe in Excellence



Royal United Hospitals Bath
NHS Foundation Trust

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Cinos is a consultancy-led organisation, experienced in providing collaboration solutions to both the NHS and the public sector.

The Royal United Hospitals Bath NHS Foundation Trust (RUH) provides acute treatment and care for a catchment population of around 500,000 people in Bath, and the surrounding area.

Providing 732 beds and a comprehensive range of acute services, the Trust employs around 4,800 staff at their 52-acre site on the outskirts of Bath city centre.

Cinos was invited to tender for the replacement of the ageing RUH telephone system, and produced a design based on its Stellaris Bespoke offering. This allowed the solution to be tailored to the exact requirements of the RUH.

The scope of the project was for a robust solution comprising close

to 3000 IP telephone handsets, a replacement switchboard console, and resilient analogue telephony to emergency phones throughout the campus.

Standard telephony services were required for the majority of users, but the successful solution needed to deliver voicemail, instant messaging, a call queuing system for the IT service desk, and the ability to interface with legacy telephony services. The solution proposed by Cinos was able to meet all the technical requirements put forward by the trust while still remaining the most commercially competitive.

Cinos' experience and proven track record in delivering solutions of all sizes to the NHS gave the Trust confidence that they were in safe hands with an organisation totally in tune with the demands and challenges faced by RUH in providing the very best healthcare services.

The Requirement

As with most other acute hospitals within the UK, RUH relied heavily on their legacy telecommunications platform for communication within the hospital, and to external entities such as affiliates and patients. The outgoing telephone system was a Siemens ISDX which had been in service for over 30 years and was now struggling to keep pace with the demands of the organisation.

With the end of support date for this platform set at April 30th 2017, RUH needed to procure a modern replacement which could provide full feature parity with the ISDX as well as offer additional features to users while allowing for a phased transition between the old and new platforms.

With equipment room space on the hospital campus at a premium, and the aim of reducing hardware maintenance costs, the RUH mandated that the new solution be a cloud based VoIP solution. Any new hardware installed on hospital premises needed to be kept at a minimum, but without providing any single point of failure, with total system resiliency being absolutely key.

The Trust required the new platform to be capable of interfacing with existing peripheral legacy telephone applications, such as a paging system, and auto attendant, to maximise the investment in existing communications already made. These applications, especially the paging system, are critical for the trust to provide patient care, and operate an efficient service.

To enable RUH to continue to provide their patients and visitors with access to emergency phones in corridors, and on the wards throughout the hospital, the solution had to include connectivity for 91 analogue 'Red' handsets that did not rely on any LAN connectivity.

The Solution

Cinos was awarded the contract because their proposed solution not only met, but in most cases exceeded all requirements, and offered an extremely high level of redundancy, while still having the most competitive price. Cinos' experience in working with and delivering collaboration solutions to the NHS gave RUH additional peace of mind that their vital communications platform is in safe hands.

The solution is Cinos' Stellaris bespoke deployment. With Stellaris Bespoke, any number of dedicated applications can be combined within a private hybrid cloud to exactly fit the customer requirements. Cinos' expertise in this field allowed a full suite of Cisco Unified Collaboration products to be deployed. Combined with complementing products from Gamma and Aculab, Cino could ensure that all of the RUH requirements were at least met, but in most cases exceeded.

The core telephony applications were installed in two tier three datacenters, and use secure VPN connections over the RUH existing N3

to provide access to call control, voicemail, presence, contact centre, and switchboard services. In addition, call control, and voice recording applications were installed on site at the RUH to further increase redundancy.

The solution was built with redundancy in mind, and is capable of providing services to the entire RUH campus when connectivity to both datacentres is down. In the case of the 'Red' phones, these are capable of providing service to users in the event that both datacentres, and the local LAN is down, giving total resilience to the critical handsets.

The inclusion of 450 analogue ports, and connectivity to the legacy telephony applications gave total flexibility, and an innovative solution both backwards compatible, and future-proofed at the same time.

Integration with the ISDX is a crucial part of the solution because the RUH required that the cutover to Cisco IP handsets could be done at

their own pace. Cinos designed a simple cutover process requiring minimal technical resources, meaning that anyone could migrate a phone.

A dedicated Cinos project management resource was assigned to the project at all times, and held regular update meetings with key personnel at the RUH to discuss progress and offer technical assistance with the rollout.

Following the initial application build, and hardware installation, Cinos carried out extensive System Acceptance Testing (SAT) and User Acceptance Testing (UAT) with key members of RUH staff. In addition, bespoke, engineer-led administration training was given to technical personnel to ensure that they felt comfortable maintaining the system.

Once complete, RUH was able to migrate handsets and services at their own pace, and call on Cinos resource if and when they felt it necessary.



The process of migrating to our Stellaris bespoke environment was smooth, and has significantly enhanced our UC capabilities. We now have a platform which enables us to offer additional digital services to the trust and patients alike. At the same time, the reduction in fixed line and call costs that we have achieved has been significant.

Mike Holcombe,
ICT Assurance Manager Royal United Hospitals NHS Foundation Trust



The Benefits

Future Proof Design

Hybrid cloud deployment allows for future consolidation of resources into a full private cloud environment.

Platform is ready for video. Adding endpoints would allow video calls from desktop clients or room systems.

All users have instant messaging included at no extra cost.

Easy addition of firewall traversal services will enable telephony and video services to be consumed by users outside of the corporate environment.

Datacentre uses industry standard virtualisation technologies allowing the space to be utilised for additional cloud delivered services in the future.

Cost Reduction

Hardware maintenance costs greatly reduced.

Call charges reduced drastically by taking advantage of gamma sip trunks for outbound calls.

All hardware and licencing procured for the project owned by the RUH.

Redundancy

Dual Sovereign tier 3 datacentres provide architectural resilience.

Hybrid cloud deployment protects against datacentre or N3 failure.

Redundancy is inherent to the Cisco UC applications. This ensures multiple call control, voicemail, and presence options are available to endpoints at all times.

Geographically redundant PSTN connections provide active standby failover to ensure no call is ever lost.

Productivity/Efficiency

The built-in call queuing and IVR options available allow individual departments to personalise their own call flows to match their callers' expectations.

The IP based nature of the endpoints mean that they keep their telephone number wherever they go. This entirely removes the need for an Engineer to be involved when office moves take place.

Users have been able to take advantage of a secure instant messaging platform to communicate with colleagues.

The Technology

For an in-depth look at the technology we used on this project or to download the relevant data sheets please visit our website. You can also see the other projects we have been working on and catch up on any company news.



