T　ネットワーク内複数存在する機器からのＳＹＳＬＯＧを集約し記録、保存、管理することが出来ること。また、ＳＹＳＬＯＧの出力から、異常検知、検索、集計、解析、レポート作成することが出来る仕組みがある場合は、そのための具体的な提案を行うこと。

U　年々高度化・複雑化するセキュリティ脅威に対処するためには、高い専門性が要求される。ネットワーク担当者や管理者だけでは対応が難しくなってきているため、ＳＯＣサービスも有効と思われる、そのようなサービスがある場合は具体的な提案を行うこと。

V　医師、看護師、メディカルスタッフや事務職員が使用しているＰＨＳは約2700台あり、これらを業務用スマートフォンへ置き換えることを想定している。Wi-Fi環境の無い場所では、キャリア網を介した利用について提案すること。ＰＨＳからスマートフォンになることで、通話だけで無く、業務改善が期待出来るアプリケーション（チャット、グループウエア、カルテ参照など）の利用が出来る場合は、そのための具体的な提案を行うこと。

W　現有のＨＩＳ及び現有のMiNetの運用に影響を与えることなく構築し、接続されている全てのサーバ及び端末を最低限の停止時間で新MiNetに移行し、令和７年度９月末までに運用開始すること。そのための具体的な提案を行うこと。

2　資料及びコメントの提供方法　上記１⑵の物品に関する一般的な参考資料及び同⑸の要求要件等に関するコメント並びに提供可能なライブラリーに関する資料等の提供を招請する。

⑴　資料等の提供期限　令和６年９月30日17時00分（郵送の場合は必着のこと。）

⑵　提供先　〒060―8648 札幌市北区北14条西５丁目　北海道大学病院管理課係長（用度第一係）　鈴木　雅樹　電話011―706―7401

3　説明書の交付　本公表に基づき応募する供給者に対して導入説明書を交付する。

⑴　交付期間　令和６年８月13日から令和６年９月30日まで。

⑵　交付場所　上記２⑵に同じ。

4　説明会の開催　本公表に基づく導入説明会を開催する。

⑴　開催日時　令和６年８月22日14時00分

⑵　開催場所　北海道大学病院管理課入札室

5　その他　この導入計画の詳細は導入説明書による。なお、本公表内容は予定であり、変更することがあり得る。

6　Summary

⑴　Classification of the products to be procured : 15, 28

⑵　Nature and quantity of the products to be purchased : Medical Information Network System (MiNet) 1 set

⑶　Type of the procurement : Purchase

⑷　Basic requirements of the procurement :

A　MiNet is a business network that carries a complex range of data, including confidential patient-specific data, electronic medical record systems, medical accounting, data sent by web servers from each medical department and division, and live broadcasts of surgeries, so it must be configured to provide stress-free network response while taking security into full consideration. It must also be configured to prevent “communication outages” by taking measures such as redundant configuration.

B　The trunk line connecting the computer room on the 4th floor of the hospital’s outpatient building, where the core concentrator is installed, to the equipment room in the basement of the ward, will be configured with multiple redundant lines with a bandwidth of 40 Gbps using single-mode optical fiber, ensuring a communication capacity of 160 Gbps or more between the upper and lower levels on the 4th floor and in the basement. In the event of a line failure, the system will automatically detour to the remaining lines, ensuring no disruption to business operations. In addition, the core concentrator will be configured to allow stacking／clustering using optical fiber or cable.

C　The routes between the trunk concentrators constituting the trunk and the first stage concentrators branching off from the trunk shall be redundantly configured with multimode optical fiber, with a bandwidth of 20 Gbps and the ability to automatically degrade to 10 Gbps in the event of a line failure. In addition, the first stage concentrators shall be configured to allow stacking／cascading／clustering using dedicated stack cables, optical fibers, or UTP cables.

D　The number of ports required at the end is estimated to be approximately 7,600 to 9,000. The first stage concentrator and the terminal concentrator must have an automatic switching function for 10Mbps／100Mbps／1000Mbps and be connectable to terminal devices, etc., with UTP cables and RJ45 connectors. At that time, the terminals must be automatically authenticated and connected via DHCP.

E　Network component equipment must have layer 2 and 3 routing capabilities, be capable of operating under the TCP／IP protocol, and must not interfere with voice communications, DICOM 3.0 image data communications, or video distribution.

F　The system must be capable of configuring multiple virtual networks, and must have the functionality to reduce the labor required for configuration using Software Defined Networking (SDN).

G　All concentrators and servers must have at least an SNMP agent function and be capable of being centrally managed by a network monitoring device.

H　The first stage concentrator and network equipment that is not powered by the existing in-hospital uninterruptible power supply must have a UPS back up power supply, and an automatic shutdown function must be implemented for equipment that requires it.

I　The configuration must be capable of establishing an environment in which security incidents can be prevented and communications can be conducted safely by connecting via a firewall or the like to the connection boundary between MiNet and external connection segments such as forensic psychiatric care centers, regional medical cooperation, remote medical care, teleworking, remote maintenance lines, and patient Wi-Fi. In addition, the configuration must be capable of controlling access to limited segments within MiNet.

J　In order to safely perform remote maintenance, a buffer segment must be prepared between the servers and other devices connected to MiNet and external remote maintenance companies, and the configuration must enable connection via a stepping stone server, etc. In addition, specific proposals for the construction must be provided.

K　Ability to aggregate, manage, and monitor multiple external connection lines installed within MiNet.

L　A wireless LAN system must be established and operated at the hospital, the School of Medicine, and the School of Dentistry as a means of communication to input orders on mobile devices, PDAs, etc. at bedsides and in outpatient procedures in all wards. When connecting such devices to the wireless LAN system, authentication must be performed without imposing a burden on users, and connections must be made via DHCP.

M　MiNet’s Wi-Fi environment is connected to a large number of devices that communicate data, such as smartphones for voice calls, PDA terminals, notebook PCs, digital cameras, and smart pumps. Although the standards supported by each device vary, stable communication is possible even when devices are mixed. The system has the function of managing separate SSIDs according to the type and purpose of the connected clients.