1. Network types
   1. Star network
   2. Mesh network
2. Security
   1. Firewalls
   2. HIPPA compliance
   3. Access of information
3. Proposed architecture
   1. Star network
   2. Secure database
   3. LAN behind firewall

A quick search on the largest hospitals in the world will show that the United States does not rank among the top ten (Goddard, *Top 10 largest hospitals in the world*). While this may sound optimistic, that the United States does not need hospitals as large as those in more populated countries, it could also mean that modern local hospitals are not equipped for the influx of patients, due to poor IT infrastructure. Kyle Stevens Hospital faces the problem of network latency and poor connectivity as a result of adding a new “Radiology Images” department. “Infrastructural inefficiencies and protocol overheads” cause latency by “more than one, and often, by more than two orders of magnitude (Chandrasekaran, Godfrey, Maggs, Singala, *The Internet at the Speed of Light*). For this reason, Kyle Stevens Hospital’s current network architecture must be updated to accommodate the increase workload of the hospital. An exploration of current hospital network architecture reveals five areas to consider when creating a hospital network: carrier-class performance, flexibility and scalability, end-to-end security, operational simplicity, and total cost of ownership (Juniper Networks, *Five Requirements of a Healthcare Network*). Kyle Stevens Hospital will need to incorporate all of these areas to better meet patient demands. Due to the critical nature of hospitals, “redundancy is an essential element in facilitating reliable and safe operations in health care delivery processes” (Tay, *Revisiting Redundancy in Hospitals – A Case-based Research Study*). Since Kyle Stevens Hospital is a growing hospital, future scalability must be considered as well. HIPAA laws require complete end-to-end security of all patient information; thus, security will be a top priority. Since the hospital is implementing a large network, it must be simple enough to implement and scale up when the time comes. Lastly, cost is a factor since implementation will be no small feat. Through the outlook of these areas, Kyle Stevens Hospital will set itself up for success.