

IT Requirements

1. Server Platform
 - 1.1. VSphere instance running on IBM servers
 - 1.1.1. 40 TB Solid state storage with ability to seamlessly add more
 - 1.1.2. SSD storage with thin provisioned VM's will allow for perfect balance of utilization and performance at all times
 - 1.2. Virtual system requirements
 - 1.2.1. Ubuntu Server
 - 1.2.2. At least 4 instances to decrease response time and handle millions of users
 - 1.3. Connectivity
 - 1.3.1. Fiber connections to handle huge traffic
 - 1.3.2. Interconnection to other Hot Site to keep backups in sync
2. Reliability
 - 2.1. Service Level Agreements
 - 2.1.1. System will run 24/7, maintenance will occur during minimal usage hours
 - 2.1.2. < 3 seconds response time during max utilization
3. Recoverability
 - 3.1. System will constantly be backed up to a "Hot site" that replicates the system. In case of failure, users will seamlessly be transferred to hot site without interruption
 - 3.2. System and DB admins will have access to backups in case of incidents
 - 3.3. CSIRT will be focused on investigating any threat agents or attacks involved with our system and/or its data
4. Security and Privacy
 - 4.1. Database (PostgreSQL)
 - 4.1.1. Admin has C.R.U.D. permissions
 - 4.1.2. All Personal Information (PI) and passwords will be encrypted and stored in a secure database.
 - 4.1.3. Doctors can update records through UI
 - 4.2. Account information
 - 4.2.1. User data
 - 4.2.1.1. Personal / registration data will be stored in compliance to NIST standards
 - 4.2.1.2. Saved courses information will be analyzed to better understand trends and provide insights for future patients
 - 4.2.2. FERPA considerations
 - 4.2.2.1. Parents of patients under the age of 18 may submit requests to view patient information of their child
 - 4.3. Admin access controls
 - 4.3.1. DB admins can create and delete all types of users. Coaches can only create and delete patients
5. Maintenance
 - 5.1. Planned down time requirements
 - 5.1.1. Database maintenance monthly
 - 5.1.2. Updates to course information can be made without downtime
 - 5.1.3. IT maintenance twice per year during lowest utilization hours

