IT Requirements

1. **Server Platform** (for each "server" required) - Ubuntu Linux
    1.1. Physical system requirements
        1.1.1. Storage capacity - Be able to handle 10 million users. - 1000TB
            1.1.1.1. Compared to other web applications, we came up with the capacity of 1000TB. Using Facebook as an example, we took their photo storage capacity and divided it in half due to the demand of our program. Though we will not host as many photos as Facebook, we felt this was a good gauge.
        1.1.2. Speed requirements / response time parameters - none specified/ask client?
        1.1.3. Scalability plans - Again, be able to grow to handle 10 million users in 2 years. - we will expand our storage at 50% of our capacity, given the growth rate.
            1.1.3.1. We will expand our storage at this rate to ensure for accessibility of the system. At 50% capacity, the system may begin to slow down. To avoid this, we will increase the storage capacity.
        1.1.4. Be able to handle 1,000 concurrent users. - our design will have the power to handle 1000 coaches logged in and documenting clients at the same time. We will provide allocated backup space for this scenario.
            1.1.4.1. This number of concurrent users was specified by our client.
    1.2. Virtual system requirements
        1.2.1. OS to be supported - ubuntu
            1.2.1.1. System will be designed for users on both mobile and desktop
            1.2.1.2. The system will be contained in a web browser so users can access it on any platform
        1.2.2. Number of images expected - One main server, and we will provide 2 backups for redundancy.
            1.2.2.1. We will provide 2 backups for redundancy. This allows for there to be a backup of the backup, in the event something fails.
        1.2.3. Compatible with LAPP server
    1.3. Connectivity
        1.3.1. Network considerations - security, uptime, accessibility, private cloud over public cloud
        1.3.2. Interconnection to what other systems - database & server connections
2. **Reliability**
    2.1. Service Level Agreements
        2.1.1. Uptime requirements - 99.99%, no specific requirement but we are aiming for system to be up at all times
            2.1.1.1. We would like our system to be up for as long and as consistently as possible. This allows for the most efficient work environment for our client.
        2.1.2. Response time requirements - Minimal response time for efficient use - The system will be fast so that it can handle very quick processes such as recording notes during a phone call which require attention to detail and the ability to move quickly throughout the interface.
3. **Recoverability**
    3.1. Where are things backed up? How often?
        3.1.1. Data is backed up to a secondary server.

3.1.1.1. This is to have redundancy and ensure backups are available in the event of a failure.

3.1.2. Data is backed up once a day, later in the evening to avoid backup complications while users are using the system

3.1.2.1. This level of frequency will allow for client's data to be secure in the event of a failure, allowing for the most recent images to be accessed. In addition, the backups will take place later in the evening to provide minimal disruption in daily work flow.

3.1.3. Super Admins have access to this data

3.2. Access to backups? - Only the super admins will have access to backups and the ability to restore from them.

3.3. What data is transient and doesn't need to be stored longer term?

3.3.1. All data should be stored long term, unless a Super Admin removes it. If a client is no longer active, their information and data relevant to them will be stored for 5 years from date of deactivation. While a client is active, their information and data relevant to them will be compressed every 5 years. This will allow for the data to be stored long term, without providing much effect on the storage capacity.

4. **Security and Privacy**

4.1. Database

4.1.1. Access controls by userid / roles

4.1.1.1. Each Super Admin will have access to their company's database and the information pertaining to their company specifically.

4.1.1.2. Only Super Admins will be able to access Database information, for security purposes.

4.1.2. Update vs. Access

4.1.2.1. Each time a coach or supervisor uses the system they will be updating Database information.

4.1.2.2. Super Admins can access the Database information using their unique login ID.

4.2. Account information

4.2.1. User data

4.2.1.1. Personal / registration - Client profile information will be gathered after an in person, or phone interview with a coach.

4.2.1.2. All users will have a profile with personal information and notes. These profiles will include images.

4.2.1.3. User data within the system will be secured and only accessible to coaches once they authenticate themselves.

4.2.1.4. User data within the database will be secured and only accessible to Super Admins once they authenticate themselves.

5. **Maintenance**

5.1. Planned down time requirements

5.1.1. Database maintenance

5.1.1.1. Weekly-Bi Weekly database maintenance/upkeep

5.1.1.1.1. Database maintenance and upkeep will be conducted weekly or bi-weekly, on as as needed basis. This will allow for the database to stay up to date.

5.1.1.2. Major maintenance / updates on an as needed basis

5.1.1.2.1. As major changes are made to the system or maintenance is required, such updates will be conducted on an ass needed basis. These routines will be conducted in the evening to provide minimal work-time disruption.

5.1.2. Times of year when IT does maintenance

5.1.2.1. Weekly - Bi Weekly Minor Updates and bug fixes

5.1.2.2. Monthly - Bi Monthly Major updates and bug fixes

5.1.2.3. Maintenance/Updates will be scheduled during companies off periods, avoiding peak times and service outages.

5.1.3. Times of year when the systems are not available?

5.1.3.1. System should be available all year round, as biweekly and bimonthly updates are designed to ensure proper operation and minimal down time.