Recommend an Authentication Strategy

For this writing assignment, your audience is the technical manager of an online health care communication and data storage system. She has asked your team to design a system that

* Allows medical practitioners and users to communicate via secure chat
* Allows patients to send pictures to doctors for diagnosis
* Maintains medical records and health insurance data
* Sets up calendar entries for appointments
* Allows patients to use their own devices (e.g,. smart phones)

You have been specifically tasked with recommending the ***authentication strategy*** to be employed for this system, some of which will run on public cloud infrastructure.

# Assignment

Your assignment is to research and report on authentication strategies, then recommend the best among them or an in-house alternative. A few such strategies are listed here as starting points for your research, with some introductory documentation for each in the links:

* [Kerberos](https://access.redhat.com/documentation/en-us/red_hat_enterprise_linux/6/html/managing_smart_cards/using_kerberos)
* [SAML](https://developers.onelogin.com/saml)
* [Mutual TLS](https://developers.cloudflare.com/access/service-auth/mtls/#:~:text=Mutual%20TLS%20(mTLS)%20authentication%20ensures,can%20reach%20a%20given%20resource)
* [OpenID Connect](https://www.onelogin.com/blog/openid-connect-explained-in-plain-english)
* [Facebook Login](https://developers.facebook.com/docs/facebook-login/)
* [Auth0](https://auth0.com)
* [Choosing between OAuth2 and SAML](https://www.mutuallyhuman.com/blog/2013/05/09/choosing-an-sso-strategy-saml-vs-oauth2/)

A successful recommendation paper will demonstrate

* Understanding of the implications of the kinds of data stored and accessed,
* Understanding of the important characteristics of each authentication method reviewed,
* Clear reasons for selecting the winner.

A paper like this is typically 3-5 pages. Precise organization and structure will vary, but these writeups usually contain

* An introduction that explains the motivation for the research,
* A short discussion of the constraints and considerations that influence the decision,
* A succinct description of each strategy under consideration, and
* A careful articulation of which one is best and *why*.

Remember that you are trying to convince someone who may or may not have as much security education as you do, but is technical. *Remember your audience*. Your grade will be based on how well you articulate your viewpoint and on the completeness of your suggested approach.

If the scenario needs more detail, feel free to invent and describe that detail in the introduction.

# Grading

Your paper should be written clearly and concisely, speaking directly to the points above. There are many ways to organize such a paper, but remember this: your audience doesn’t usually have a lot of time to read, and will likely use it to decide what additional questions to ask you.

Papers are subjective business, so grading will be done with a focus on providing actionable feedback. You can adjust and resubmit as many times as you like to improve your score until the first day of project presentations. Don’t wait, though. This class speeds up as it goes along!

Important things you will be graded on:

* Coverage: did you hit all of the important aspects of the paper?
* Accuracy: did you learn how things worked before making suggestions? Can I tell?
* Attribution: do you cite your sources?
* Language: did you proofread for spelling, grammar, and tone?
* Audience: did you write the right kind of paper for the person intended to read it?