CS312 :: Homework 6

This assignment will get you thinking about the difficulties in replacing Active Directory - a fairly simple install - with its Linux equivalent. You'll also do some investigation into DNS records.

Linux Equivalents to Active Directory

1) What are some possible equivalent services or implementations of the following Active Directory services that could be run on Linux:

- **Domain Services**: Tracks information about members of the domain, including computers and users, in various directories. Also defines access rights to the devices, files, and services on the domain (Hint: Look into LDAP).

- **Certificate Services:** Generates and maintains a private/public key infrastructure.

- **Federation Services**: Also known as Single-Sign-On, or SSO, this allows authenticating in just one place, and having access to all resources across the domain *and* with other connected services, domains, or technologies (websites, other domains, etc.). For example, your ONID access is federated across Google, OSU infrastructure, your Box account, etc.

- **Rights Management Services**: Encrypted file management and access services.

Your answer to this should take one to two pages. Please discuss the advantages and disadvantages of each package you're considering as a replacement for something listed above, contrasted with Active Directory. If you find a single package that seems to handle all of these, please feel free to discuss it! *(20 points)*

DNS Questions

2) What is a DNS A record? Give an example of one. *(5 points)*
3) What is a DNS SRV record? Give an example of one. *(5 points)*
4) What is the difference between a forward and reverse lookup DNS query? What special kind of DNS record is required to make this work? *(5 points)*
5) Instead of using .local at the end of a domain name, like we've done in our reference server (cs312domain.local), the recommendation is that a true domain name be used, instead, with a real top-level-domain name. For example, our domain could have been cs312domain.com, and the IIS install on it could be mapped to www. Before you put our webserver online at www.cs312domain.com, what are some considerations - hardware, connections, etc. - you might want to make, first? There isn't a specific right answer here, but do talk about a few things that occur to you. *(5 points)*