SASL Pass-Through Authentication with OpenLDAP

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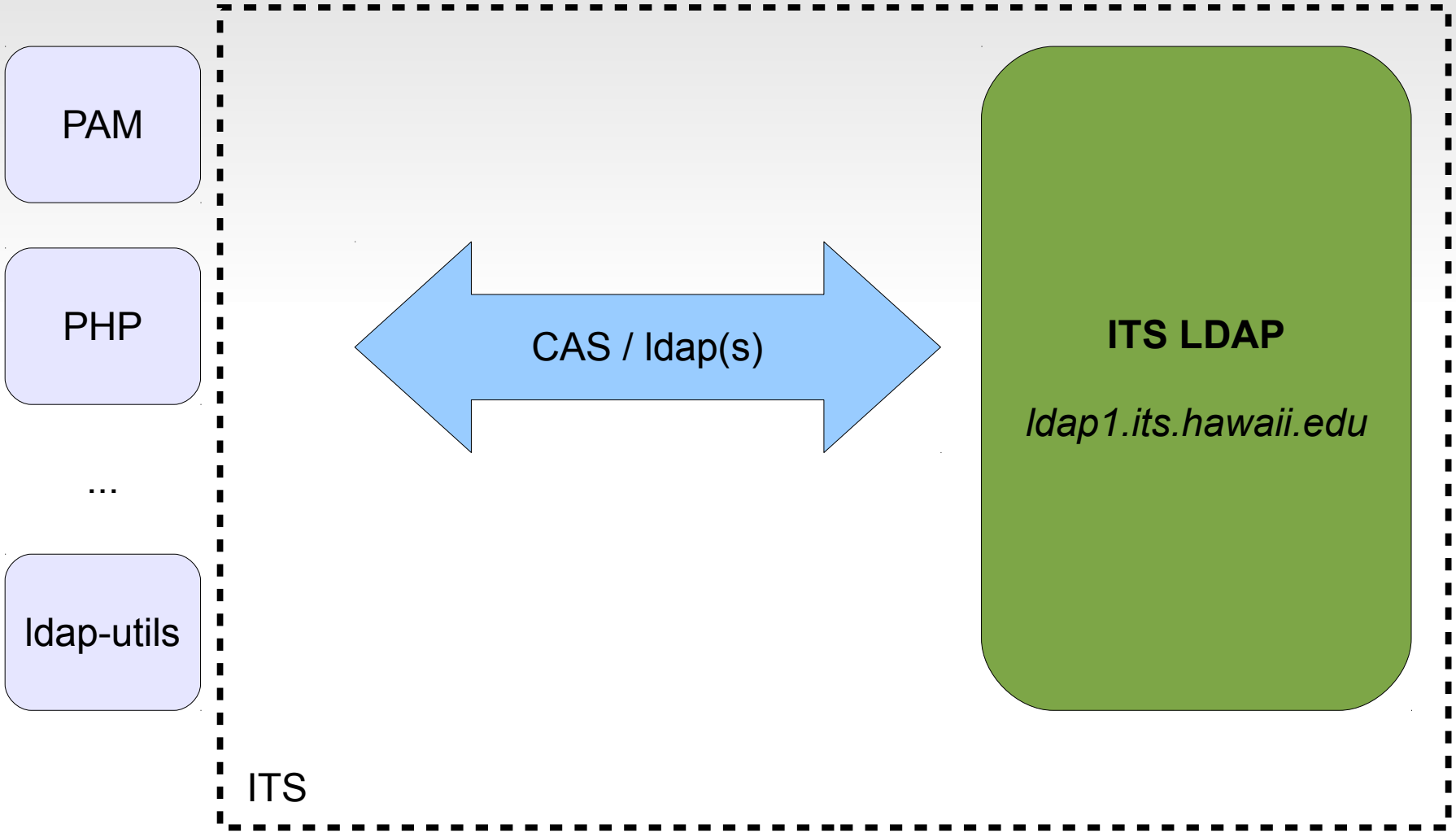
Quite a mouthful!

- SASL = Simple Authentication and Security Layer
  - framework for authentication and data security
  - decouples authentication mechanisms from applications
  - IETF Proposed Standard (2010)
- Pass-Through Authentication
  - server hands off authentication part to something else
  - invisible to the client application
- OpenLDAP
  - originally based of Univ of Michigan project
  - free, open source LDAP server implementation
  - can be downloaded from www.openldap.org
  - but is usually included in all Linux and BSDs

Concept


PAM
PHP
...
ldap-utils
CAS / ldap(s)
ITS LDAP
ldap1.its.hawaii.edu
ITS

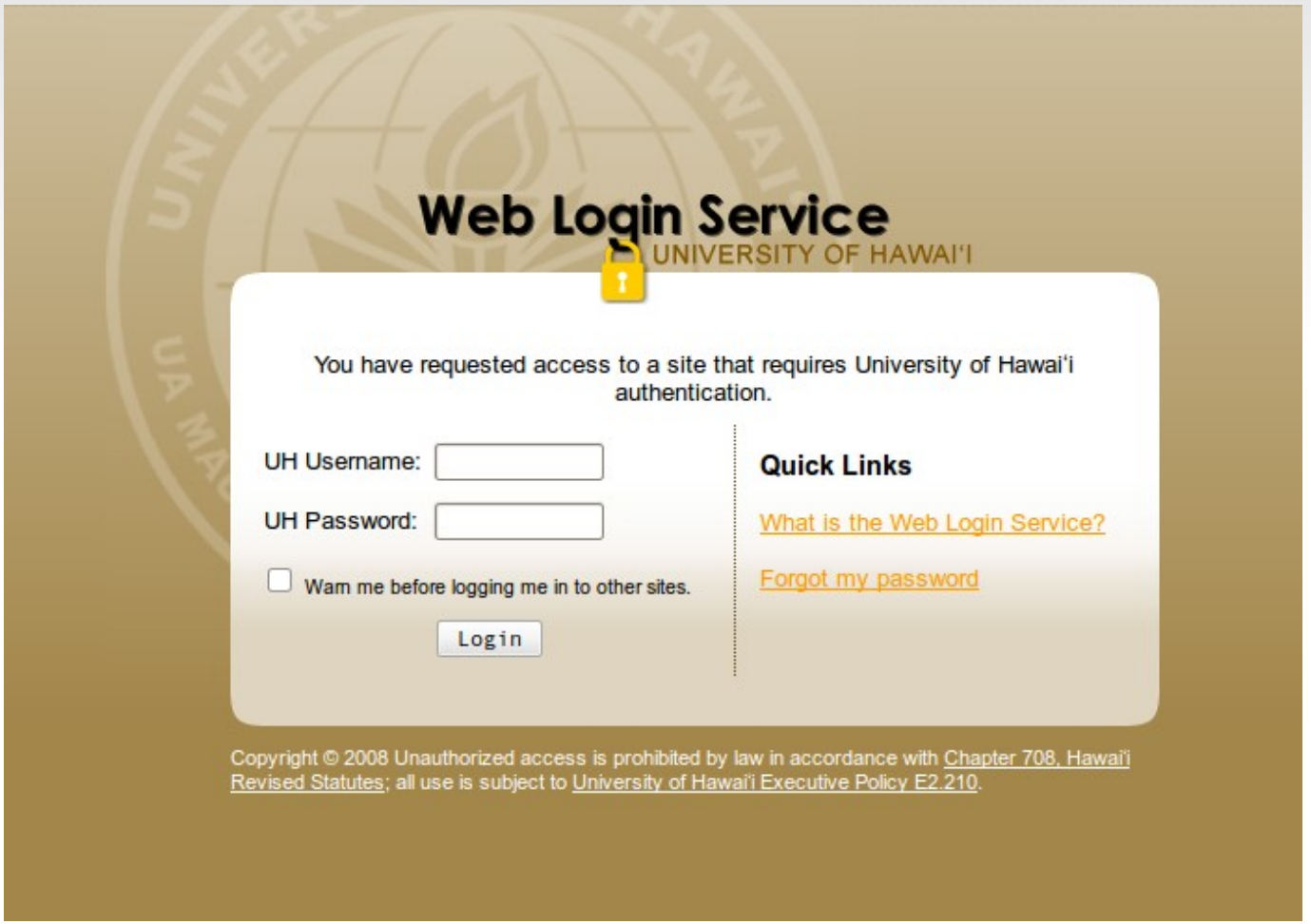
Concept

PAM

PHP

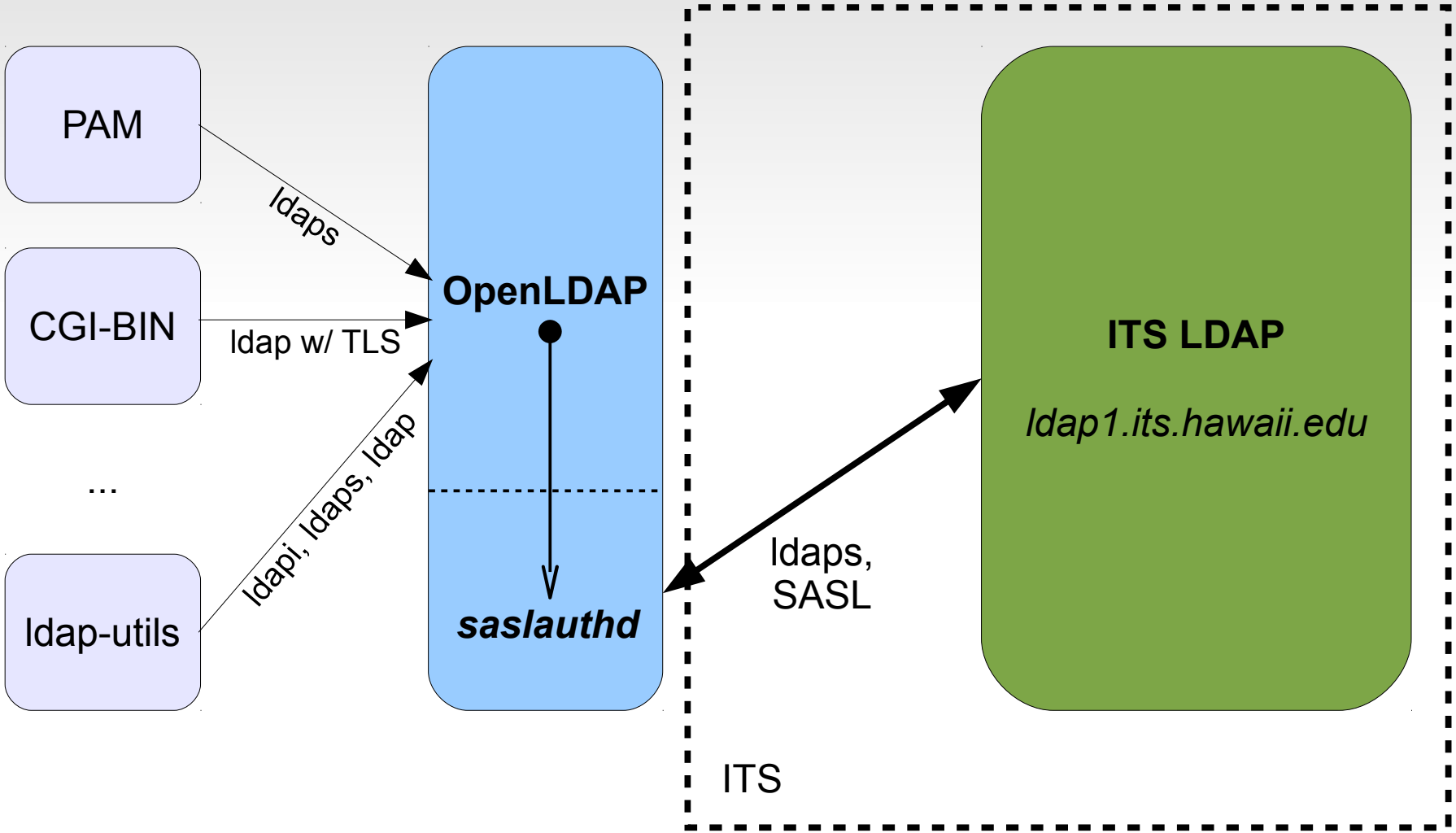
...

ldap-utils



ITS

Concept


PAM
CGI-BIN
...
ldap-utils
ldaps
ldap w/ TLS
ldapi, ldaps, ldap
OpenLDAP
saslauthd
ldaps,
SASL
ITS LDAP
ldap1.its.hawaii.edu
ITS

Advantages

- interface **not restricted** to http/https applications
- provides **local** attributes, classes and authorization policies
- **flexibility** in user management/lifecycle management
- completely **compatible** with the existing ITS LDAP directory
- no interruption with the CAS login even with web applications
- UH Credentials down to **file system level**
  - POSIX user ids and group membership define access rights
  - **desktop login with UH credentials**
  - no local caching of authorization details, **no “shadow” system**

Limitations

- user lifecycle management still not automated
  - LDAP != PeopleSoft
  - RabbitMQ may help, but not as elegant and requires separate listener
- UH LDAP does not store NTLMv2 hashes
  - no Windows passwords can be “passed-through”, this method works only for LDAP attribute “userPassword”
  - logins possible using pGina, but no Windows shares accessible (using password auth)
  - Mac OS X logins presumably possible, but require extensive adjustment of the OpenLDAP server and unfortunately LDAP schema support not up-to-date

Configuration / More Info

- Instructions can be found on the **UHIMS Wiki**
  - URL https://www.hawaii.edu/bwiki/x/CJidDQ
  - Ubuntu Server 10.04 LTS
  - all packages from the default repository
- **OpenLDAP Admin Guide**
  - chapter 14.5
    "Pass-through authentication"
- **COE LTSP Lab**
  - UH Credentials Login
  - NFS mounted home directory
  - also based on Ubuntu 10.04