Worteks

make IT work, make IT free

LemonLDAP::NG

The ephemeral miniconf

Speaker

Clément OUDOT
Identity Solutions Manager
Worteks

@clementoudot

LemonLDAP::NG
LDAP Tool Box
LDAP Synchronization Connector
FusionIAM
W'Sweet

KPTN - https://kptn.org
DonJon Legacy
Improcité

Worteks (\vɔʁ.tɛks\)

Service

Infrastructures hétérogènes et complexes, cloud, mail, authentification, securité

- Etudes, audit et consulting
- Expertise technique
- Support technique
- Formation
- R&D et innovation

Édition

V'Sweet — Portail d'applications collaboratif

V'Opla — Plateforme mutualisée de développement

V'IDaaS — Gestion des identités des accès

Partenaires

Red Hat
Advanced
Business Partner
Reseller

BlueMind

ONLYOFFICE

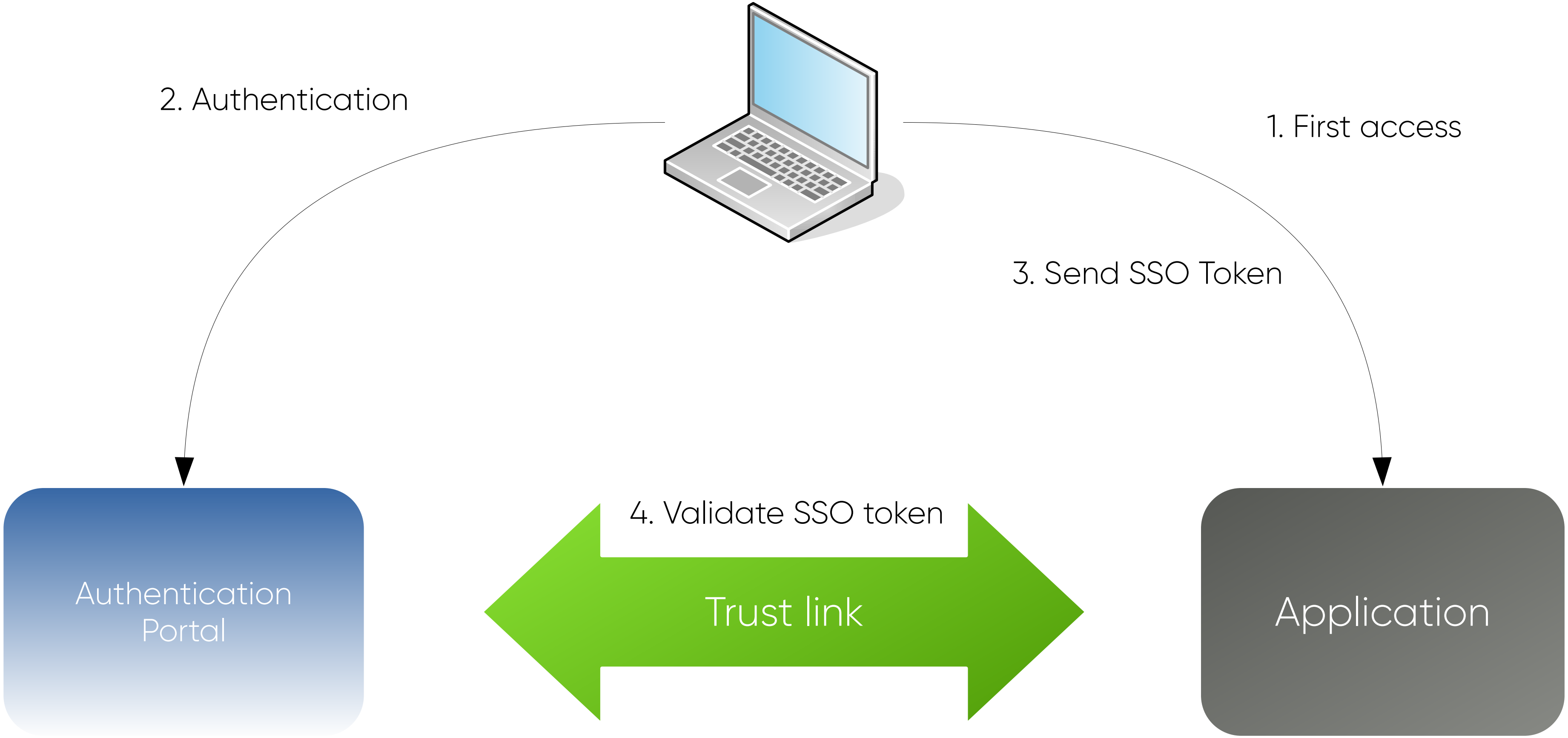
Collabora Online

Imagine SSOng

Imagine there are no passwords
Or maybe just only one
A single secured form
To access our applications
Imagine all the users
Loving security
Imagine some protocols
Made by clever people
CAS, OpenID or SAML
Even WS Federation
Imagine authentication
Interoperability

Imagine applications
No more storing passwords
Relying on a token
Even for authorizations
Imagine all developers
Loving security
You may say
I'm a hacker
But I'm not the only one
I hope one day
You will log in
Using the Single Sign On

SSO Workflow



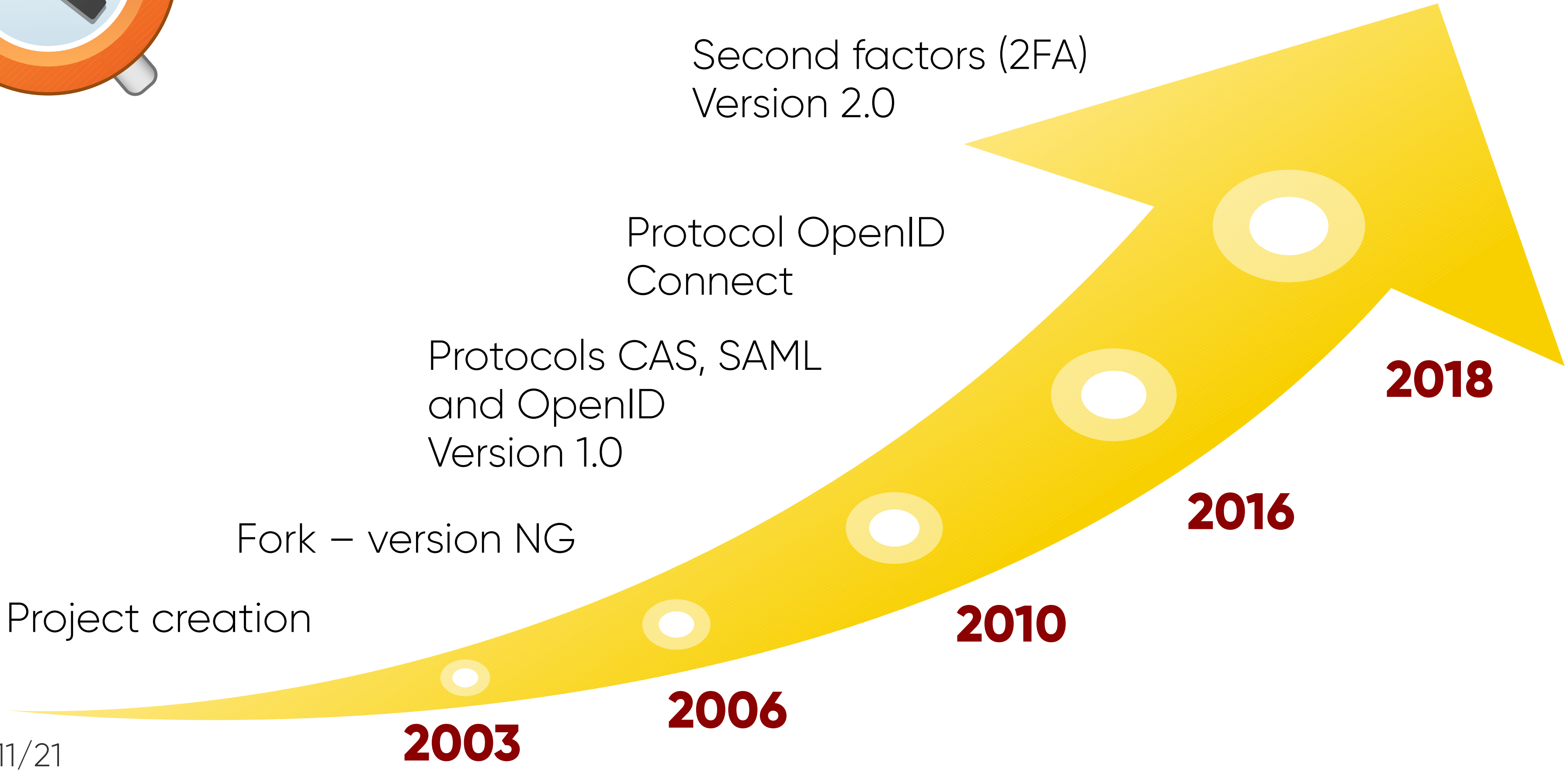
2. Authentication

1. First access

3. Send SSO Token

4. Validate SSO token

History



2003

Project creation

2006

Fork – version NG

2010

Protocols CAS, SAML
and OpenID
Version 1.0

2016

Protocol OpenID
Connect

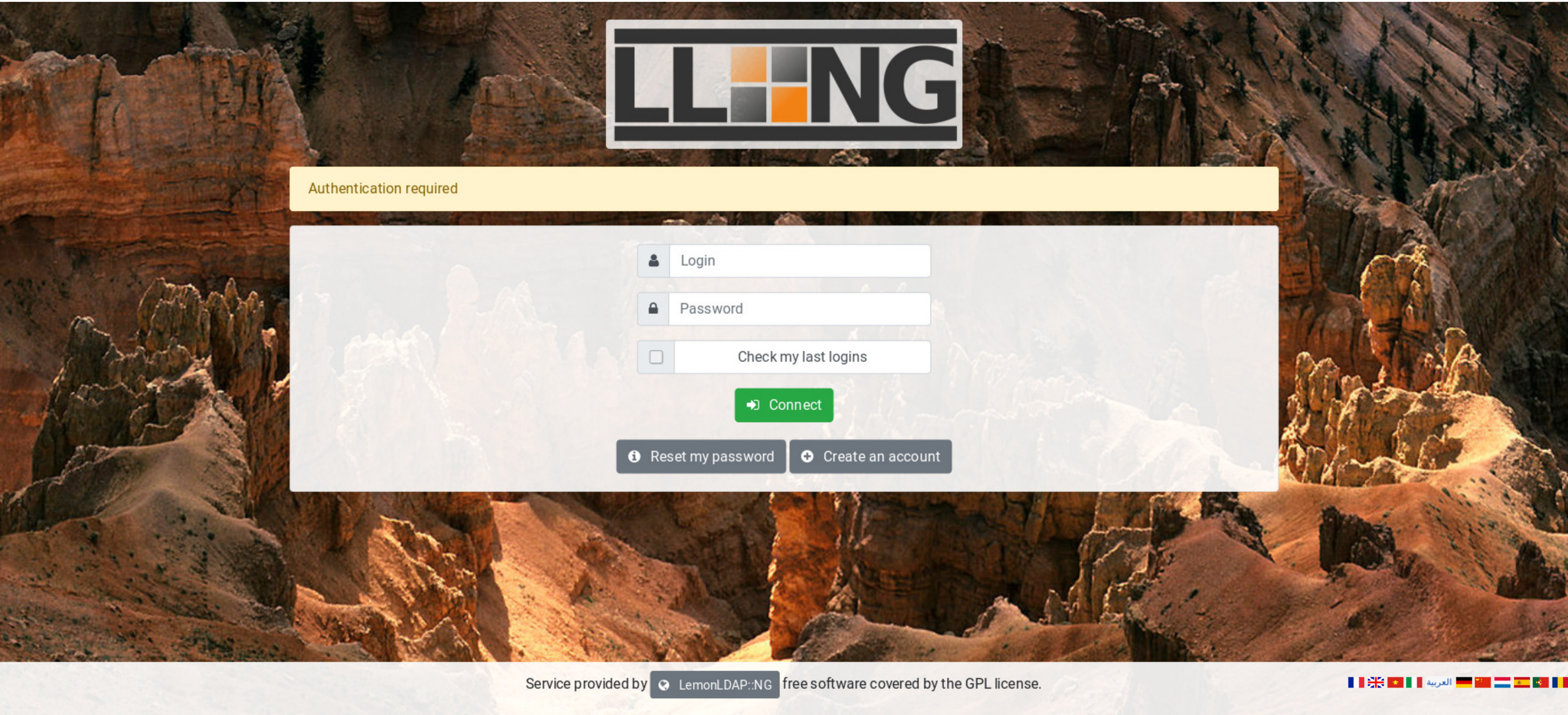
2018

Second factors (2FA)
Version 2.0

Main features

- Web Single Sign On
- Access control
- Applications portal
- Authentication modules choice and chain
- Password management, account creation
- Multi-factor authentication (MFA)
- Protection of Web applications and API/WebServices
- Graphical customisation
- Packages for Debian/Ubuntu/RHEL/CentOS

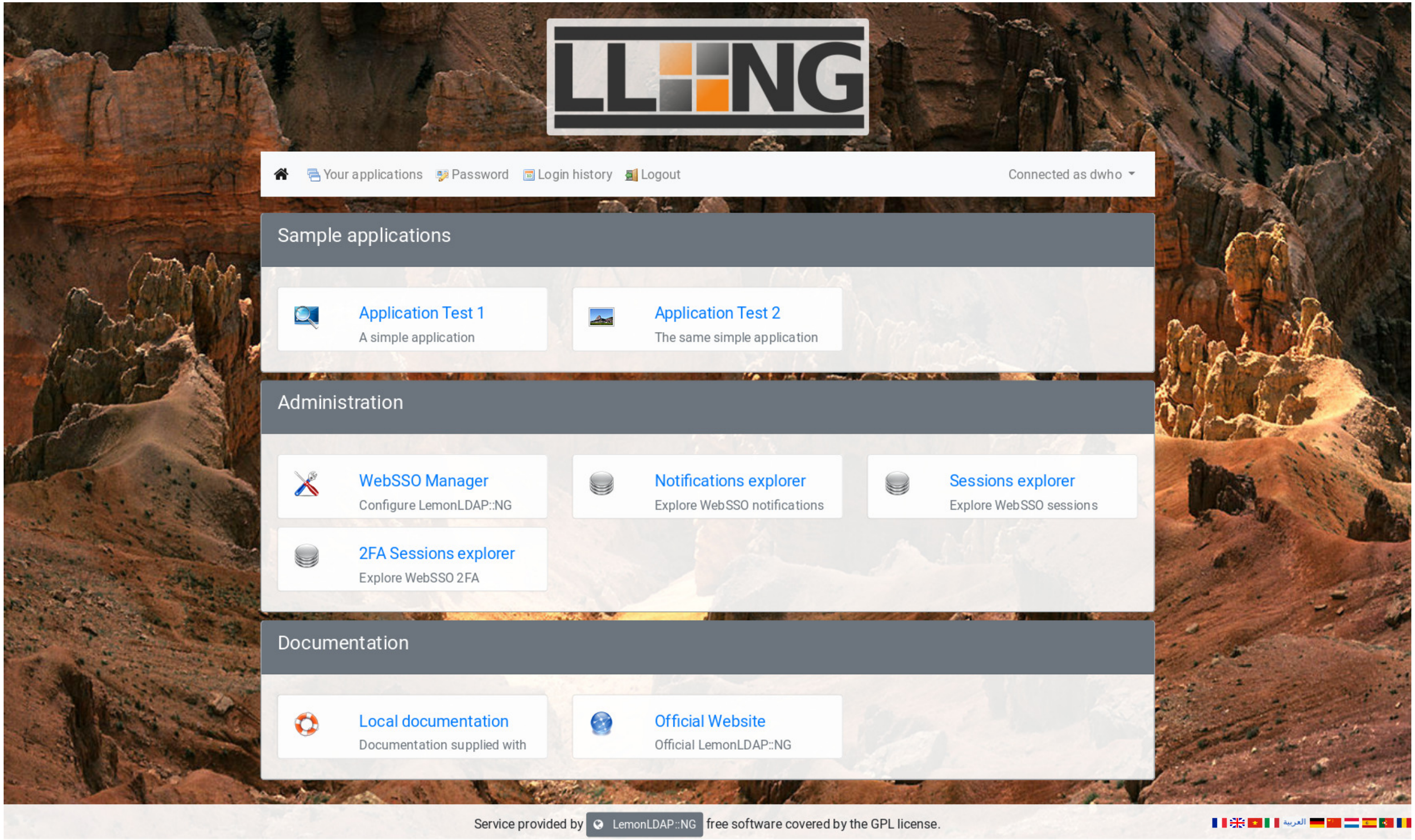
Login page



Authentication required

Service provided by LemonLDAP::NG free software covered by the GPL license.

Portal with application menu



Sample applications

Application Test 1
A simple application

Application Test 2
The same simple application

Administration

WebSSO Manager
Configure LemonLDAP::NG

Notifications explorer
Explore WebSSO notifications

Sessions explorer
Explore WebSSO sessions

2FA Sessions explorer
Explore WebSSO 2FA

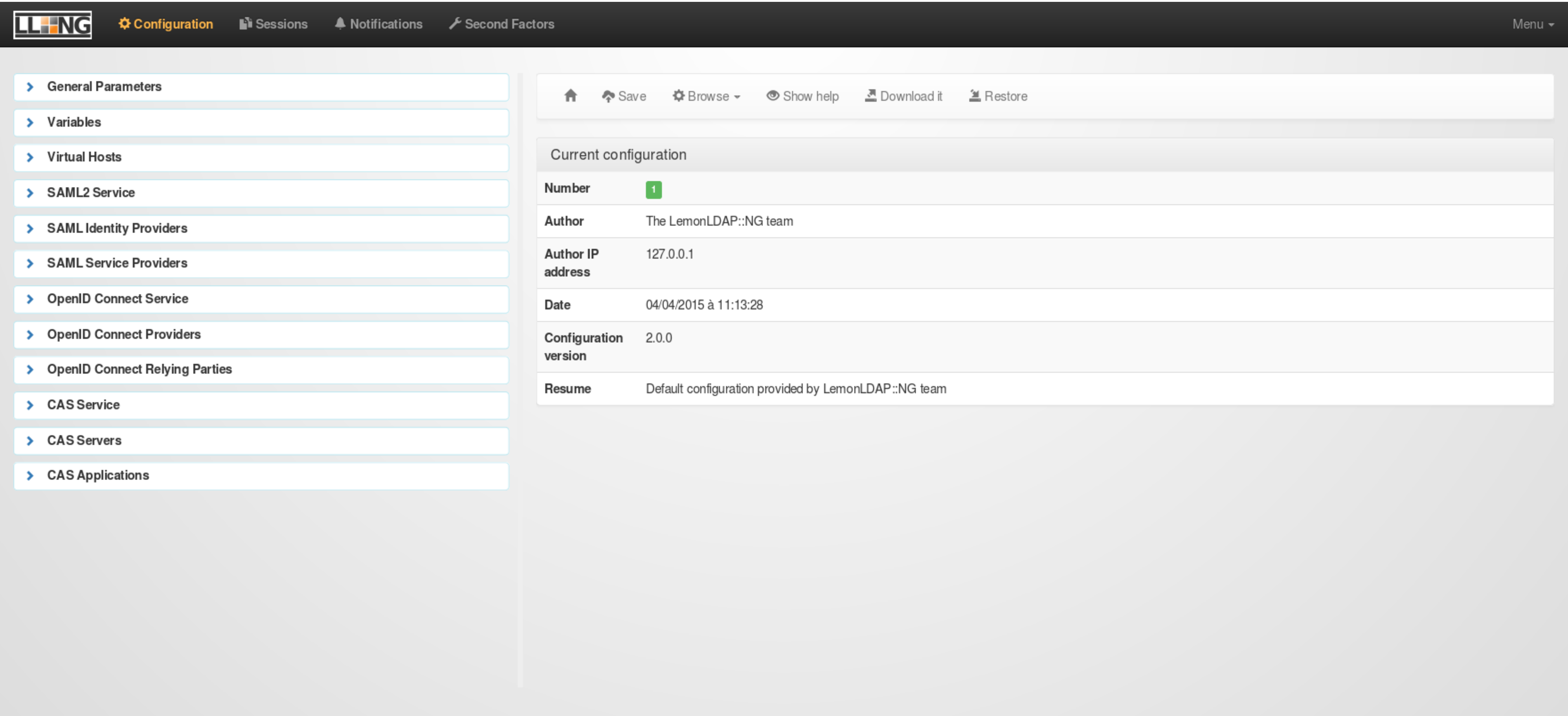
Documentation

Local documentation
Documentation supplied with

Official Website
Official LemonLDAP::NG

Service provided by LemonLDAP::NG free software covered by the GPL license.

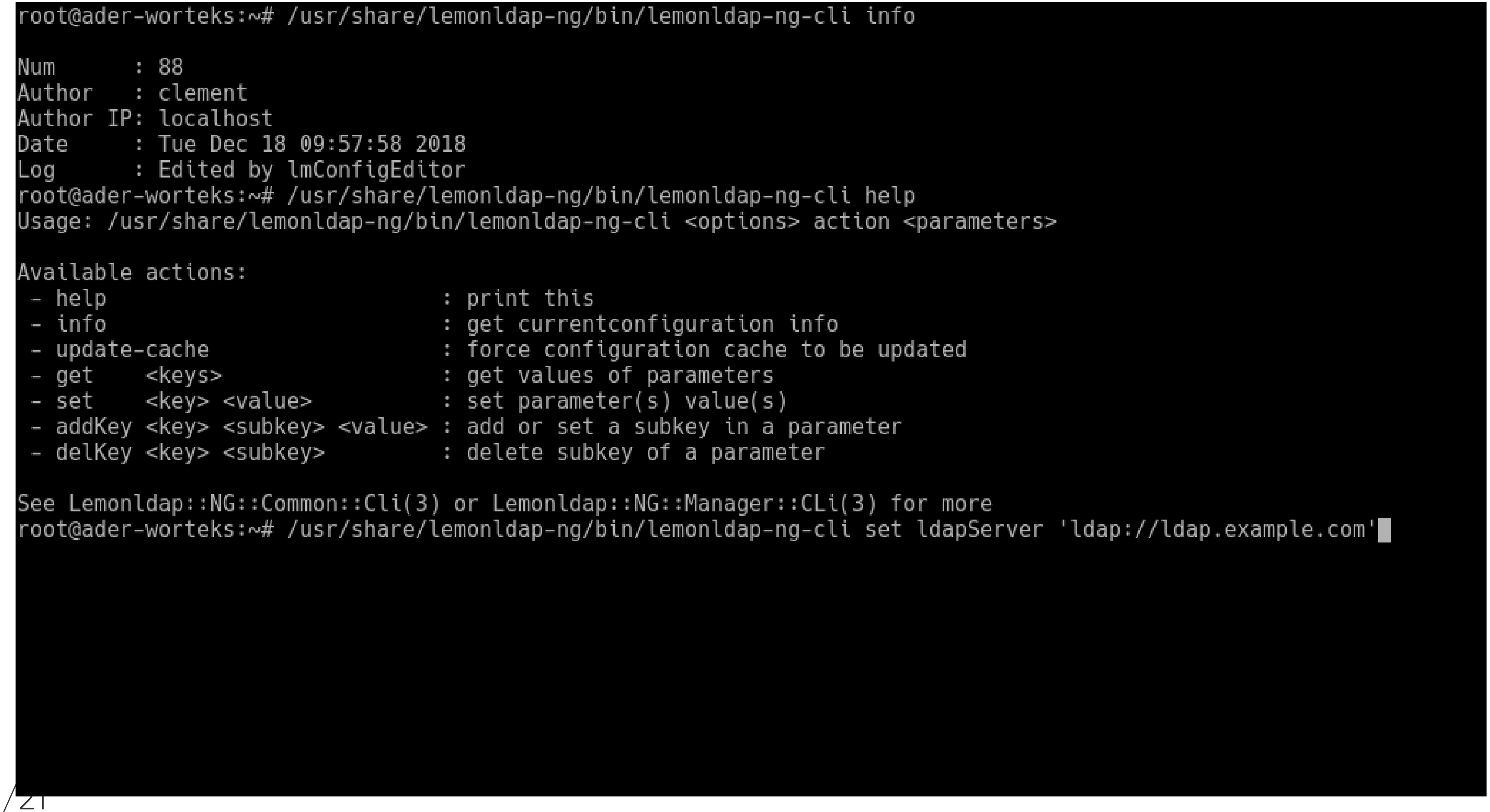
Web Administration interface



Current configuration

Number	1
Author	The LemonLDAP::NG team
Author IP address	127.0.0.1
Date	04/04/2015 à 11:13:28
Configuration version	2.0.0
Resume	Default configuration provided by LemonLDAP::NG team

Command Line Interface

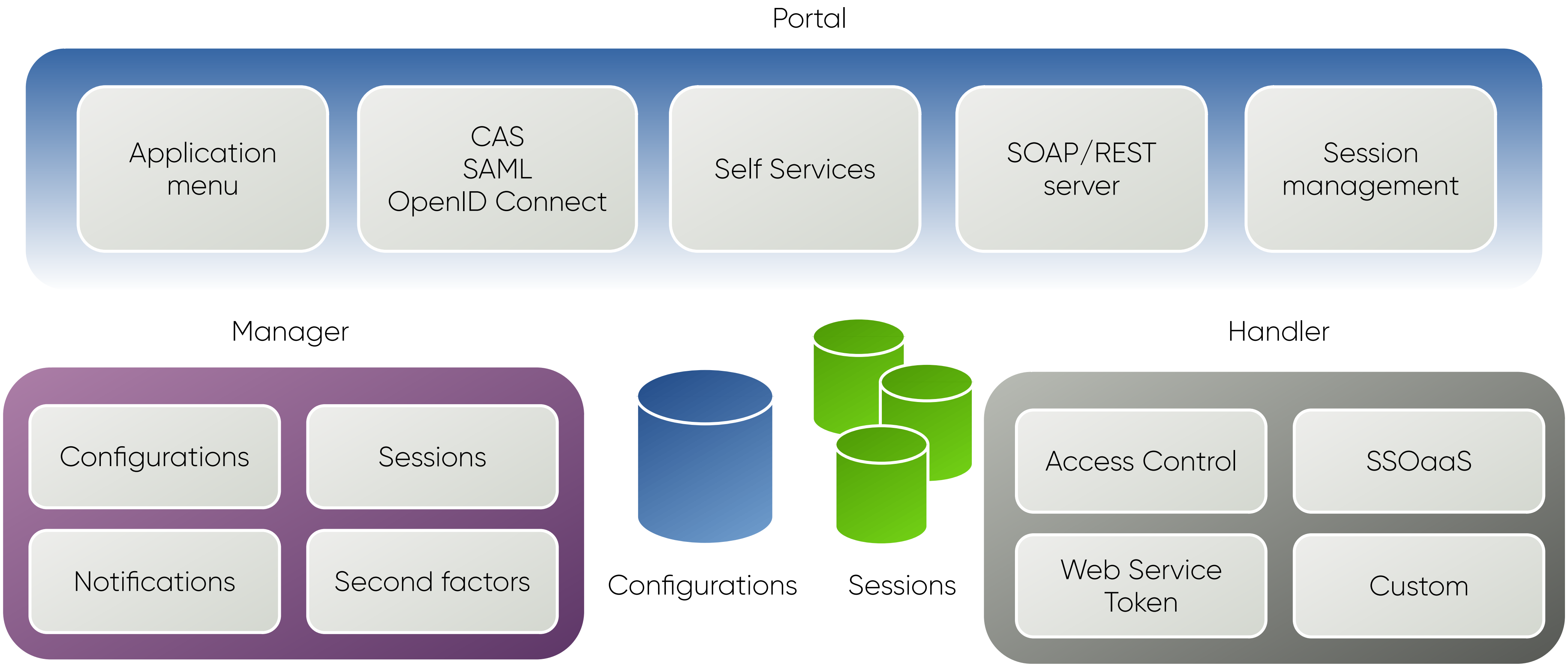


```
root@ader-worteks:~# /usr/share/lemonldap-ng/bin/lemonldap-ng-cli info

Num       : 88
Author    : clement
Author IP: localhost
Date      : Tue Dec 18 09:57:58 2018
Log       : Edited by lmConfigEditor
root@ader-worteks:~# /usr/share/lemonldap-ng/bin/lemonldap-ng-cli help
Usage: /usr/share/lemonldap-ng/bin/lemonldap-ng-cli <options> action <parameters>

Available actions:
 - help                           : print this
 - info                           : get currentconfiguration info
 - update-cache                   : force configuration cache to be updated
 - get    <keys>                  : get values of parameters
 - set    <key> <value>           : set parameter(s) value(s)
 - addKey <key> <subkey> <value> : add or set a subkey in a parameter
 - delKey <key> <subkey>          : delete subkey of a parameter

See Lemonldap::NG::Common::Cli(3) or Lemonldap::NG::Manager::CLi(3) for more
root@ader-worteks:~# /usr/share/lemonldap-ng/bin/lemonldap-ng-cli set ldapServer 'ldap://ldap.example.com'
```

Free Software

- License GPL
- OW2 project
- Forge: https://gitlab.ow2.org/lemonldap-ng/lemonldap-ng
- Site: https://lemonldap-ng.org
- OW2 Community Award in 2014
- SSO component of FusionIAM project: https://fusioniam.org/

Component roles



Portal

Application menu

CAS
SAML
OpenID Connect

Self Services

SOAP/REST server

Session management

Manager

Configurations

Sessions

Notifications

Second factors

Configurations

Sessions

Handler

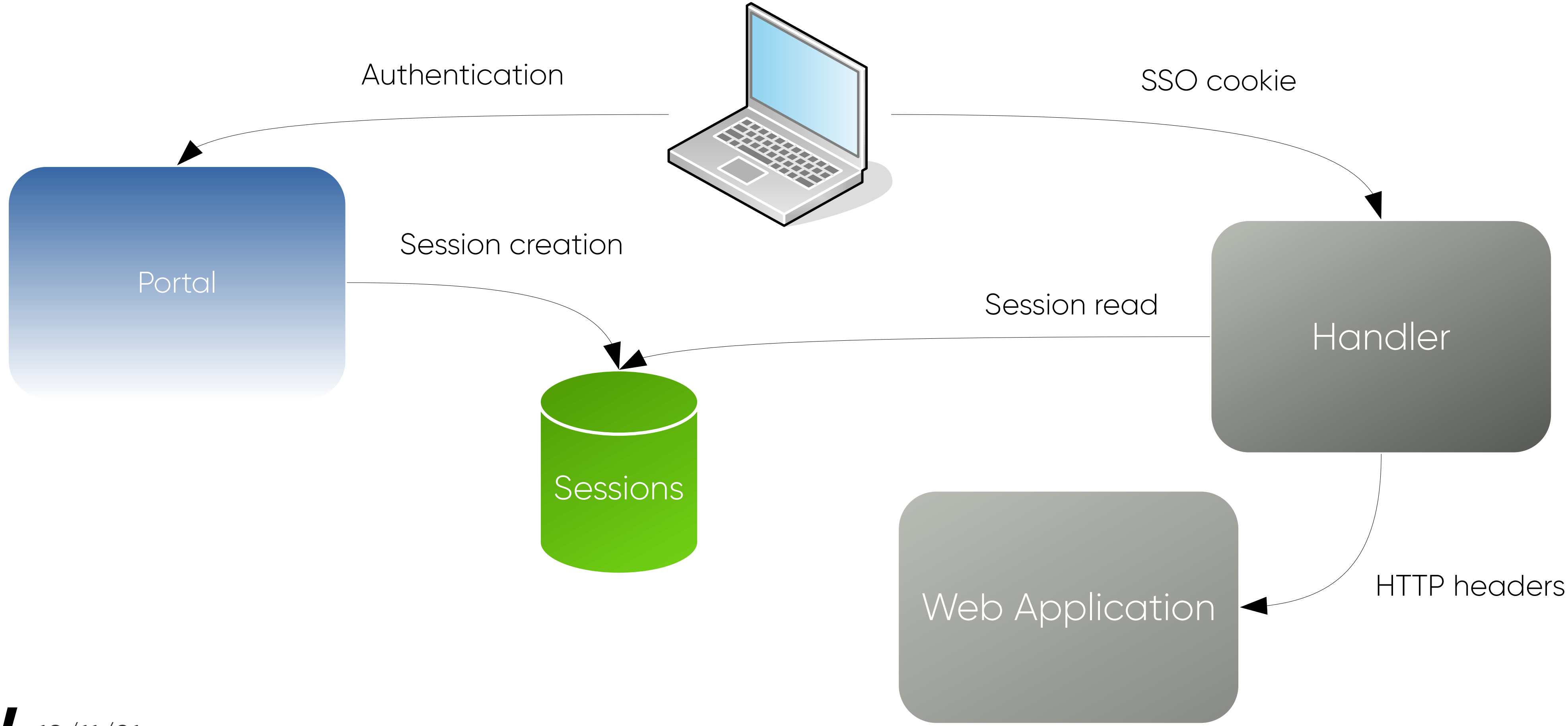
Access Control

SSOaaS

Web Service Token

Custom

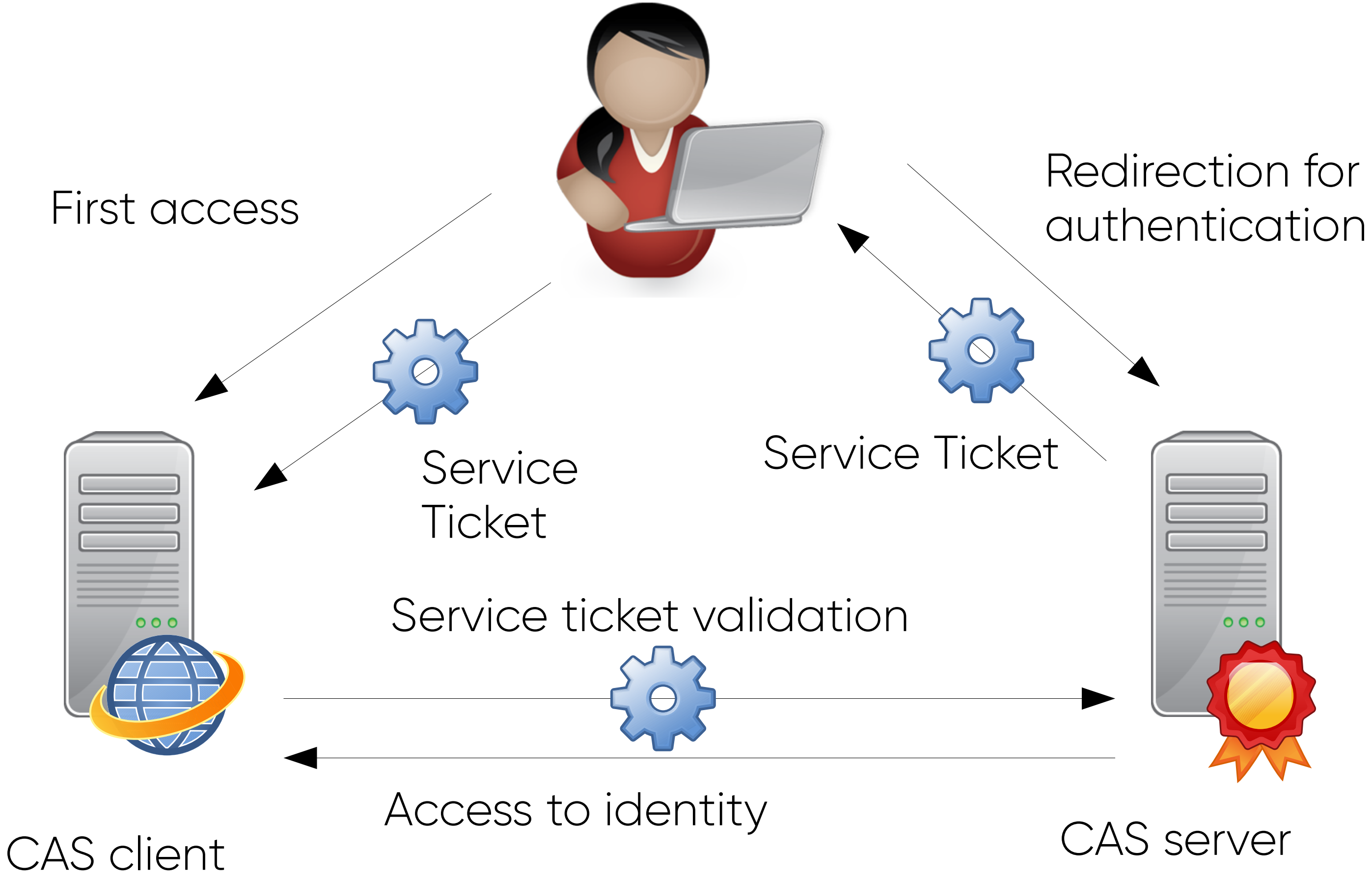
Web application



CAS

- Created by University of Yale
- Central Authentication Service
- Proxy mode since v2.0
- Attributes sharing since v3.0
- https://www.apereo.org/projects/cas

CAS



First access

Redirection for authentication

Service Ticket

Service Ticket

Service ticket validation

Access to identity

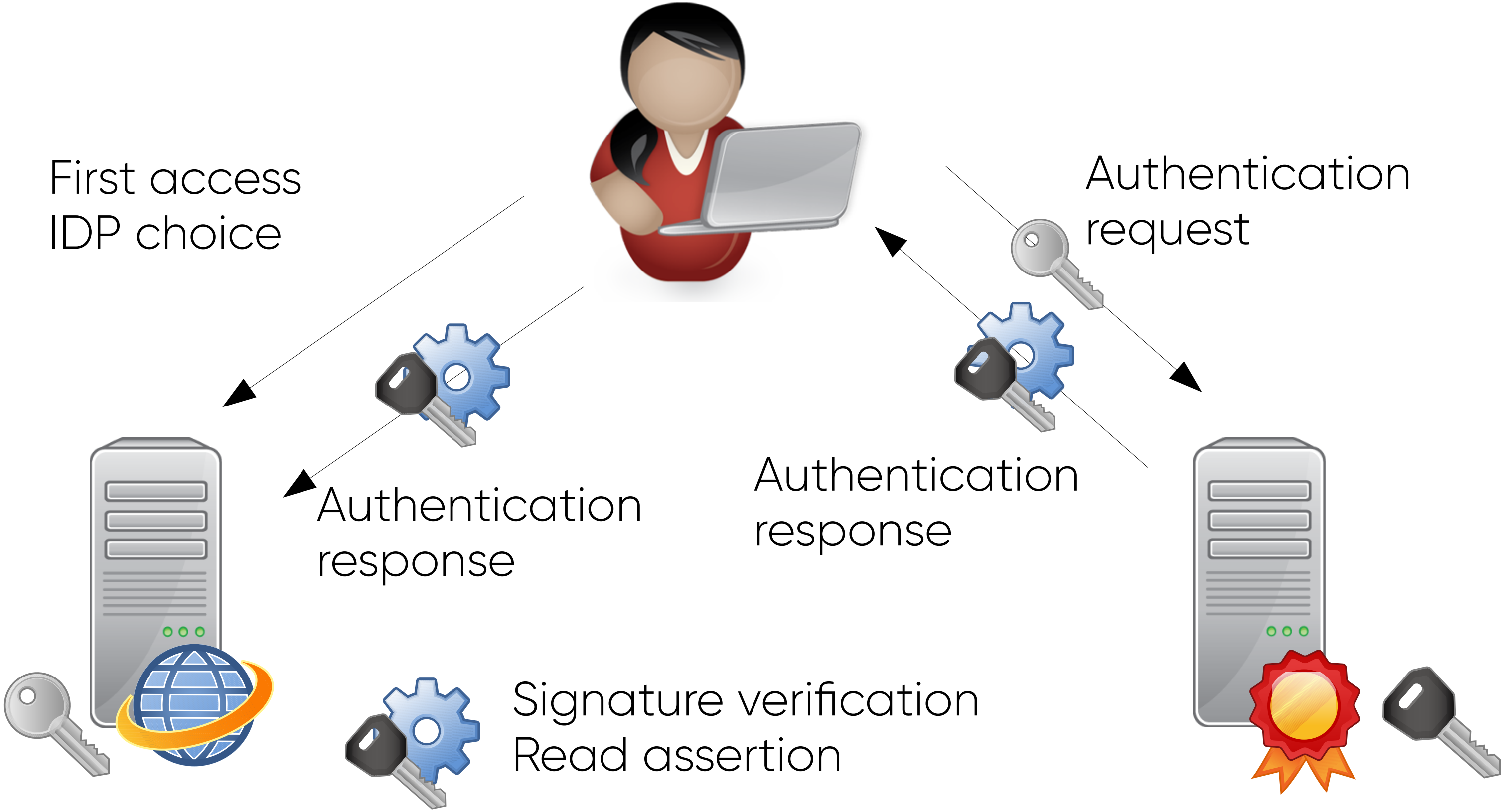
CAS client

CAS server

SAML

- Created by OASIS organization
- Security Assertion Markup Language
- Version 1.0 in 2002
- Version 1.1 in 2003
- Version 2.0 in 2005 merging SAML, Shibboleth and ID-FF (Liberty Alliance)

SAML



First access
IDP choice

Authentication
request

Authentication
response

Authentication
response

Signature verification
Read assertion

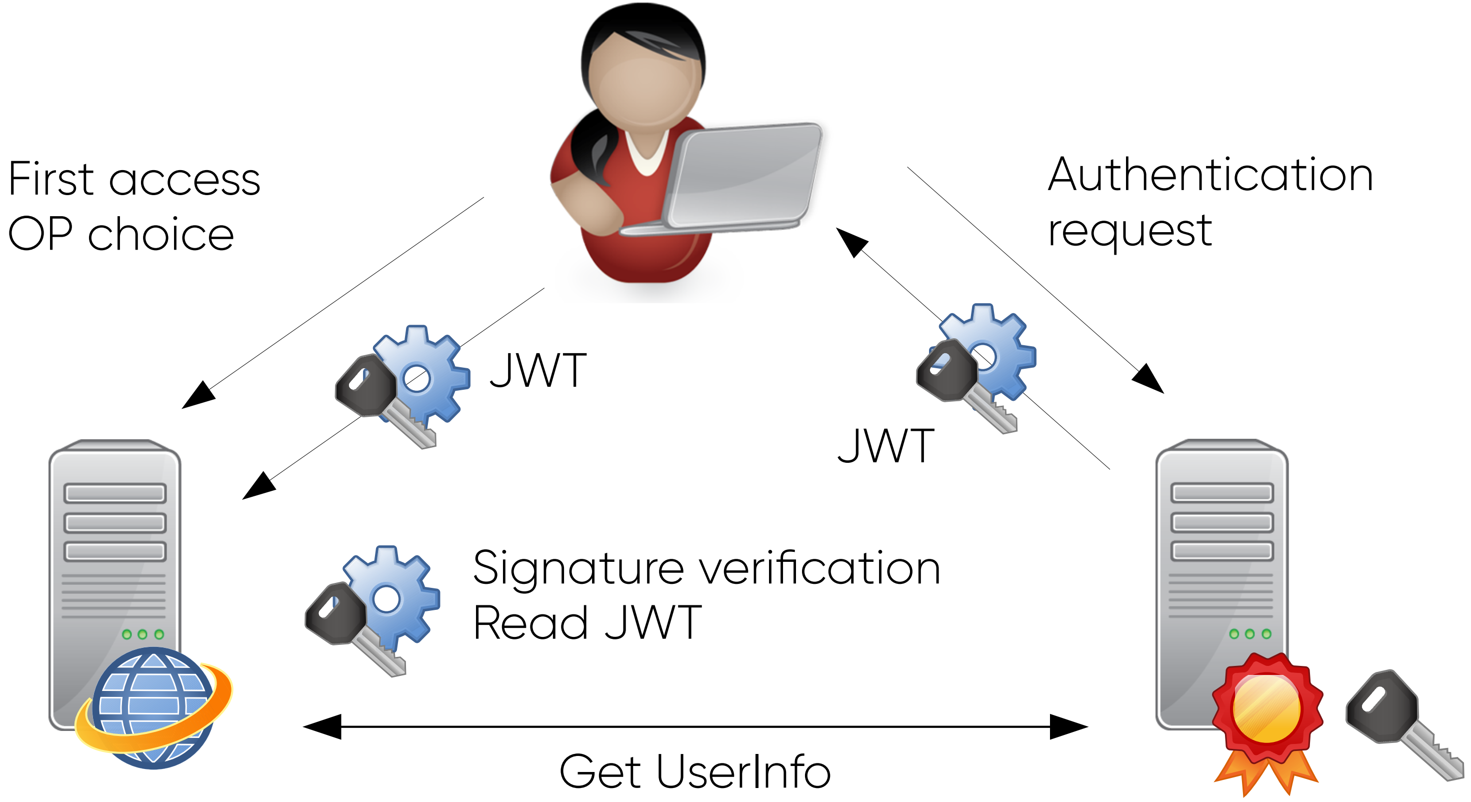
Service Provider (SP)

Identity Provider (IDP)

OpenID Connect

- Created in 2014
- Presented at RMLL in 2015
- Based on OAuth 2.0, REST, JSON, JWT, JOSE
- Adapted to web browser and native mobile applications
- Attributes sharing trough UserInfo endpoint

OpenID Connect



First access
OP choice

Authentication
request

JWT

JWT

Signature verification
Read JWT

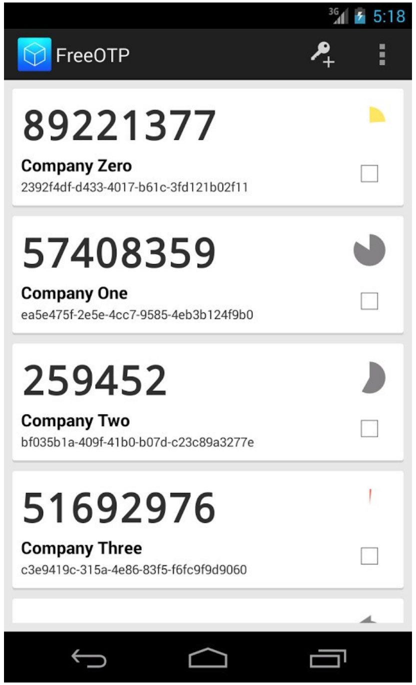
Get UserInfo

Relying Party (RP)

OpenID Provider (OP)

Second Factor Authentication (2FA)

- LemonLDAP::NG can use the following 2FA:
  - TOTP
  - U2F
  - TOTP or U2F
  - External
  - REST
  - Yubikey



5:18

FreeOTP

89221377 □
Company Zero
2392f4df-d433-4017-b61c-3fd121b02f11

57408359 □
Company One
ea5e475f-2e5e-4cc7-9585-4eb3b124f9b0

259452 □
Company Two
bf035b1a-409f-41b0-b07d-c23c89a3277e

51692976 □
Company Three
c3e9419c-315a-4e86-83f5-f6fc9f9d9060

fido ALLIANCE

RENATER / eduGAIN

- Support of RENATER / eduGAIN via SAML2:
  - Service Provider
  - Identity Provider
- Call to Identity Provider selection page (WAYF) via SAML Discovery Protocol
- Metadata bulk import script

Plugin engine

- Portal code was fully rewritten, and it now allows to write plugins
- Plugin examples, provided by default:
  - Auto Signin: direct authentication for some IP
  - Brute Force: protect against brute-force attacks
  - Stay Connected: "remember me" button
  - Public Pages: create static pages using portal skin
- Write a custom plugin: https://lemonldap-ng.org/documentation/latest/plugincustom

Other new features

- A user can refresh rights without disconnect/reconnect
- REST services for configurations and sessions
- Select language before authentication
- New graphical theme built with Bootstrap 4
- Logo customization (used in graphical theme and sent mails)
- Log system choice (syslog, Apache, Log4Perl, Sentry…)

Worteks

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Thank you

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in linkedin.com/company/worteks