Non-web federated access using QR-codes

Slávek Licehammer
slavek@ics.muni.cz

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Authentication using QR code

- For non-web services
- Support for federated authentication (e.g. eduGAIN)
- Using standardized technology
- Minimal requirements on user / client side
- Easy to use
Demonstration
Access web server using SSH
michaelp$ ssh root@cloud255-130.cerit-sc.cz
Scan QR code:

URL: https://login.elixir-czech.org/oidc/device?user_code=9RYJGX

Hit ENTER when you are done...
your previous selection

🌟 Masaryk University

or

Sign in with Google
Sign in with LinkedIn
Sign in with ORCID

or

your institutional account

🔍 Type the name of your institution

- Aalborg University
- Aalto University
- Aarhus Basic Health Care College
- Aarhus School of Marine and Technical Engineering

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Approval Required for **ELIXIR Cloud Demo**

⚠️ Caution:
This client was dynamically registered.
It has been approved [0] times previously.

Access to:

- Log in using your identity

Do you authorize "ELIXIR Cloud Demo"?

Authorize  Deny
Technological background

- Out of band authentication
- OpenID Connect (OIDC)
  - Standardized OAuth2 Device flow
- Pluggable Authentication Module (PAM)
  - Can be used by any application supporting PAM
  - PAM module with OAuth2 Device flow support
- Easy to use for user
  - Retype URL to browser
  - Scan QR code to device with browser
Future steps and ideas

- **OIDC agent (ssh-agent analogy)**
  - Proof of concept implementation exists
  - Using modified Dropbear SSH server
  - OIDC agent have to be installed on client side

- **Using on any device which is able to display QR code**
  - Shared printers, access to rooms, IOT

- **Mobile app instead of federated sign in in web browser**
  - Single sign-on
  - Easier (faster) to use
Thank you for your attention

Source code for PAM module:
https://github.com/ICS-MU/pam_oauth2_device

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