Passwordless authentication in the GUI

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Who am I?

- Software Engineer at Red Hat
- Focus on Identity Management
  - SSSD
  - shadow
  - Linux-PAM
- Past: Software Engineer in the automotive and 3D printing industries

Agenda

- Passwordless authentication
- Passkey
- Smartcard
- External Identity Provider (EIdP)
- Authentication mechanism selection
- Conclusion
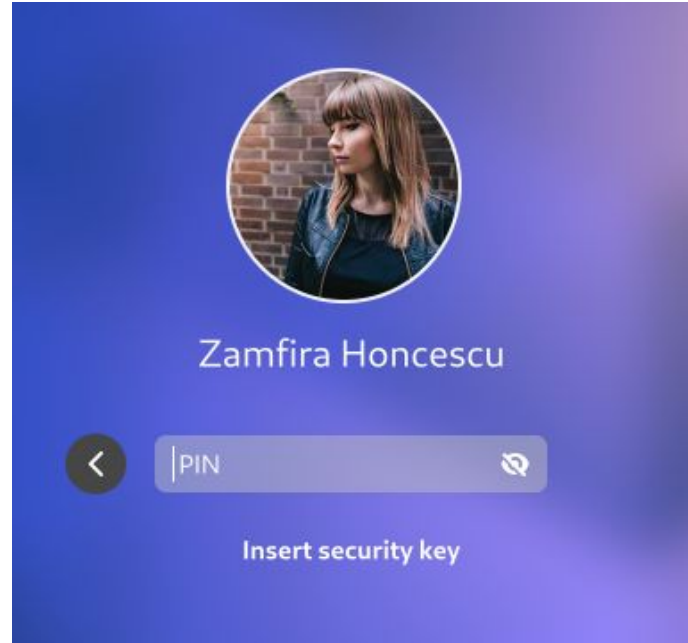
Passwordless authentication

What is passwordless?

- A way to authenticate a user without using a password
- Usually involves MFA and SSO
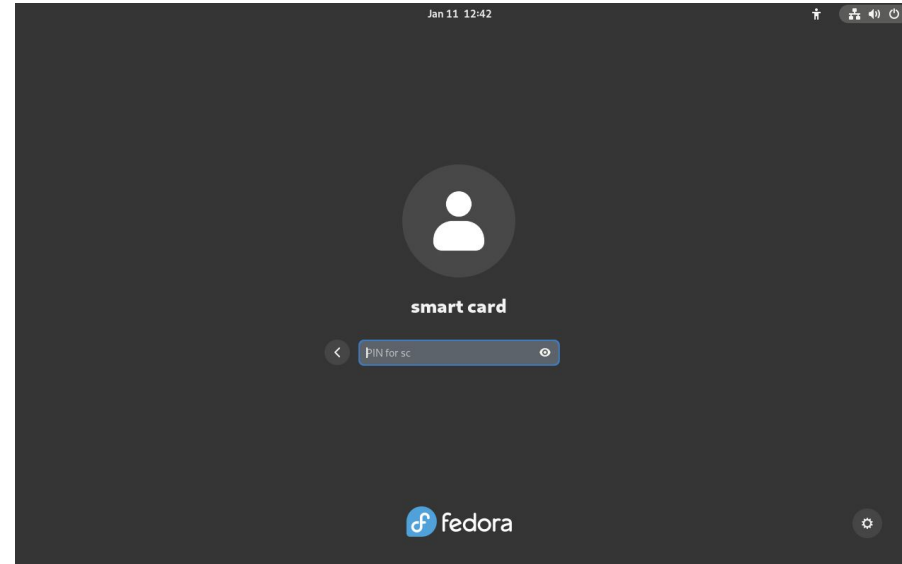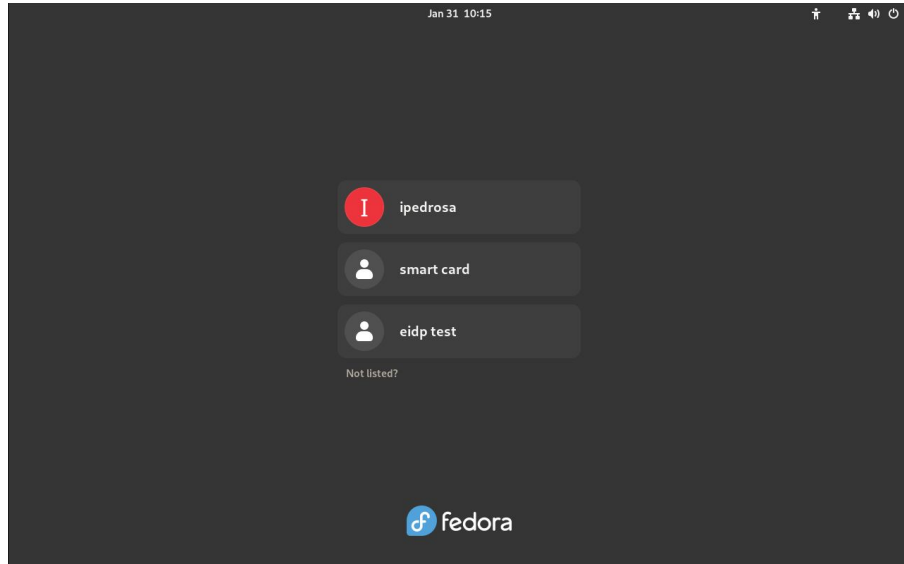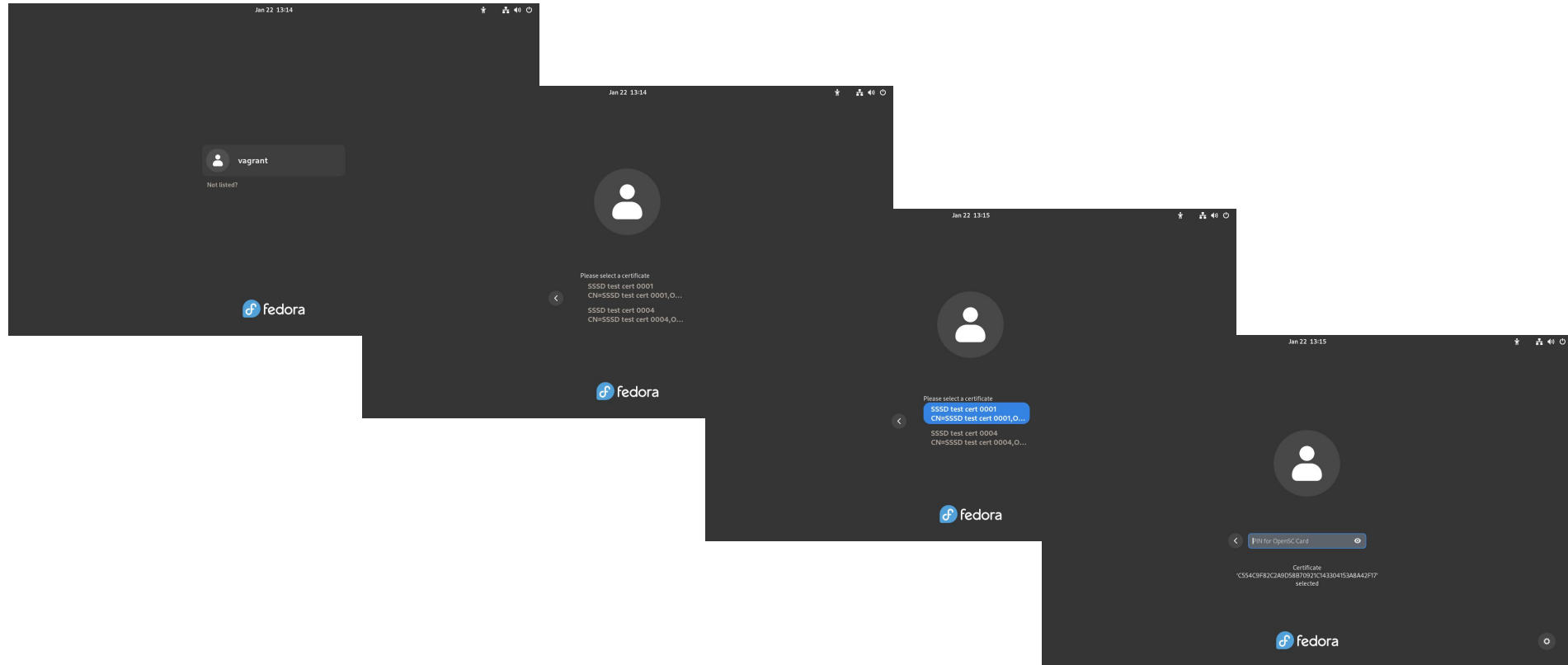- It strengthens security and improves user experience

Passwordless mechanisms

Available mechanisms for remotely managed users in FreeIPA and SSSD

- Passkey
- Smartcard
- External Identity Provider
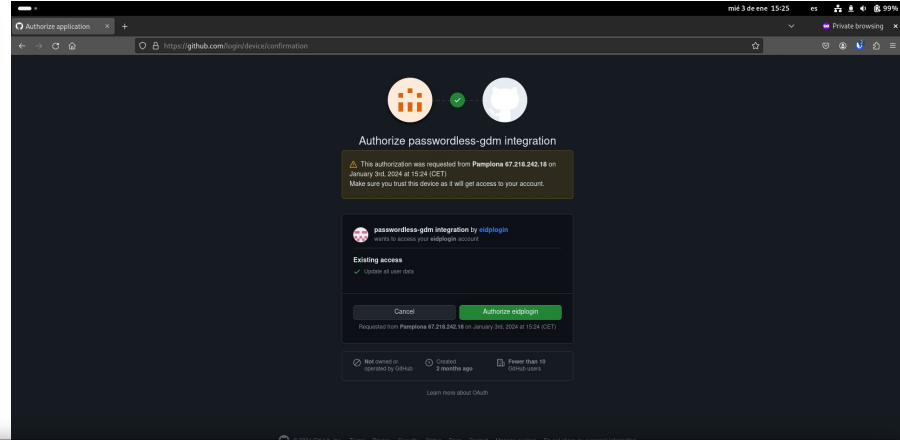
Passkey
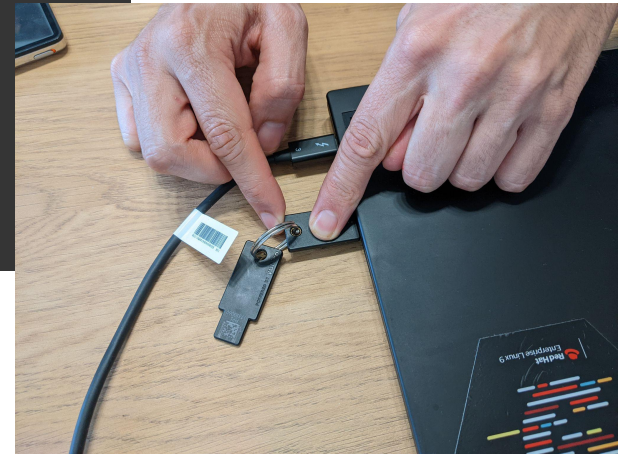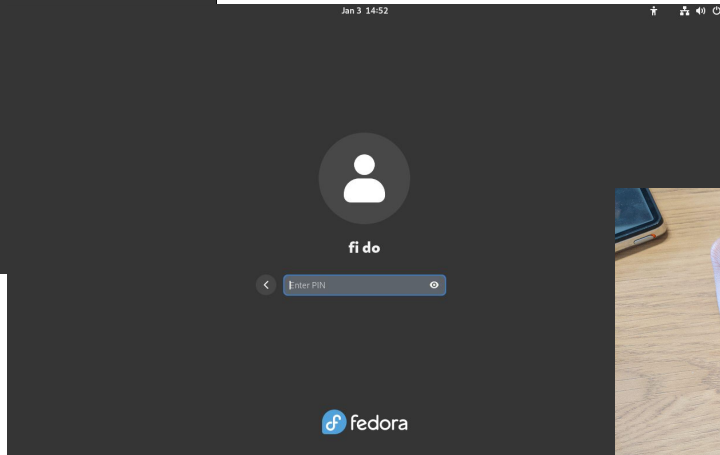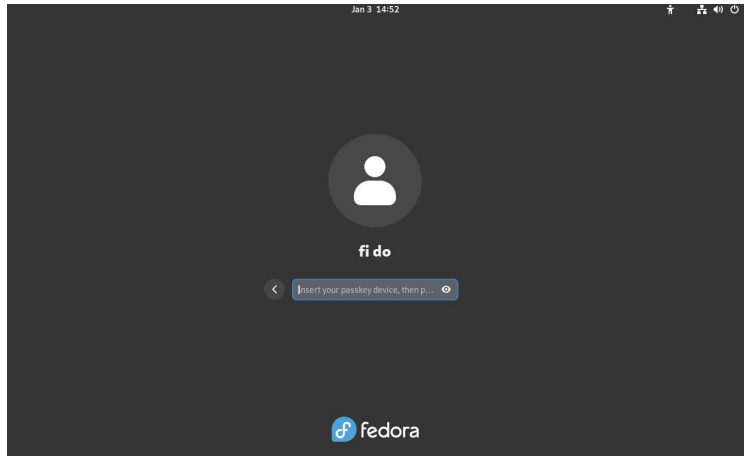
Current state

Proposal

Smartcard

Current state

Current state II

EIdP

Current state
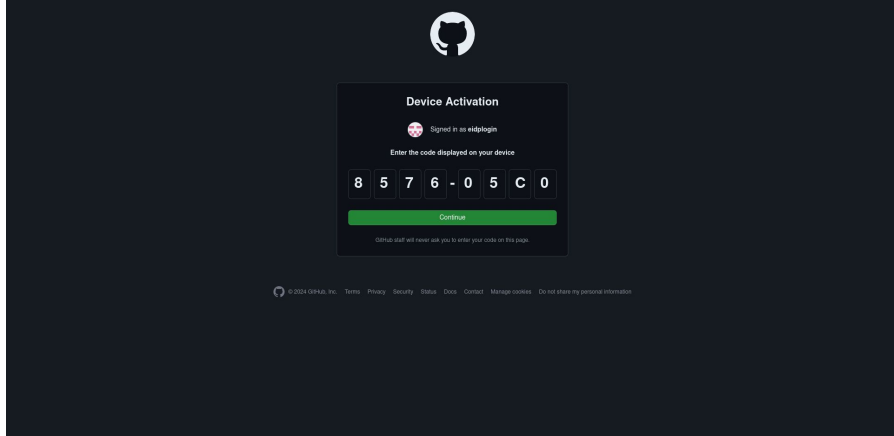
Proposal

Authentication mechanism selection

Current

- No way to change!!!

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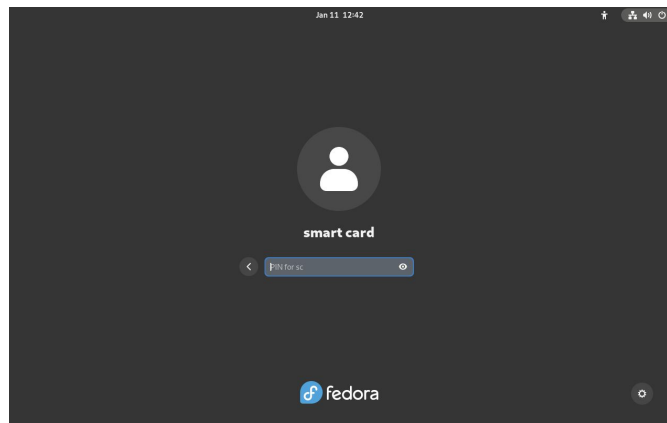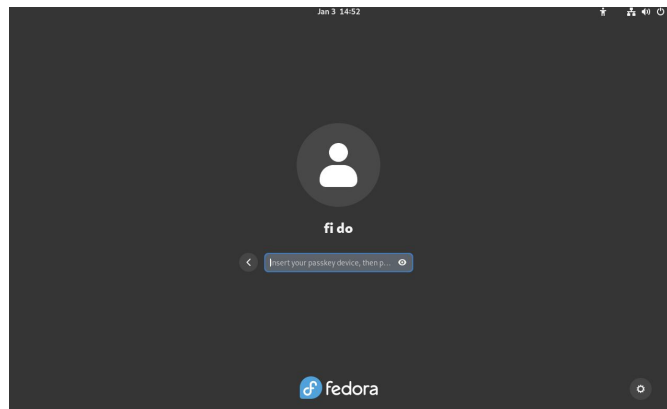
Proposal

Conclusion

Software design

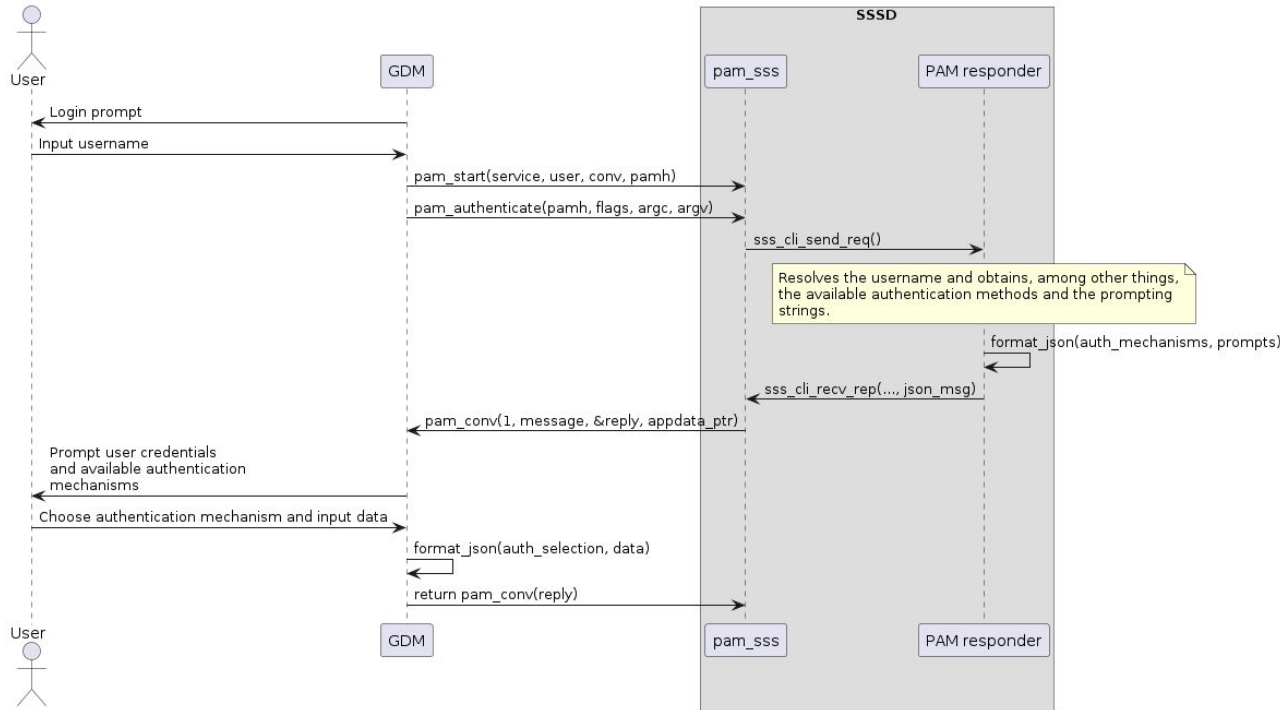- PAM conversation
- JSON formatted message
- Conversion to binary provided by GDM macros
- More details at https://github.com/SSSD/sssd.io/pull/79

Wrap-up

- The user is able to select the authentication mechanism
- The user is able to authenticate with the previously mentioned mechanisms
- The authentication mechanism of previous attempts is remembered
- The user interface should be fast and simple

Reference links

- [Design mockups](#)
- [SSSD-GDM interface design](#)
- [COPR repository](#)

Thank you!