CERN openlab

# Improving CERN Web Login Accessibility

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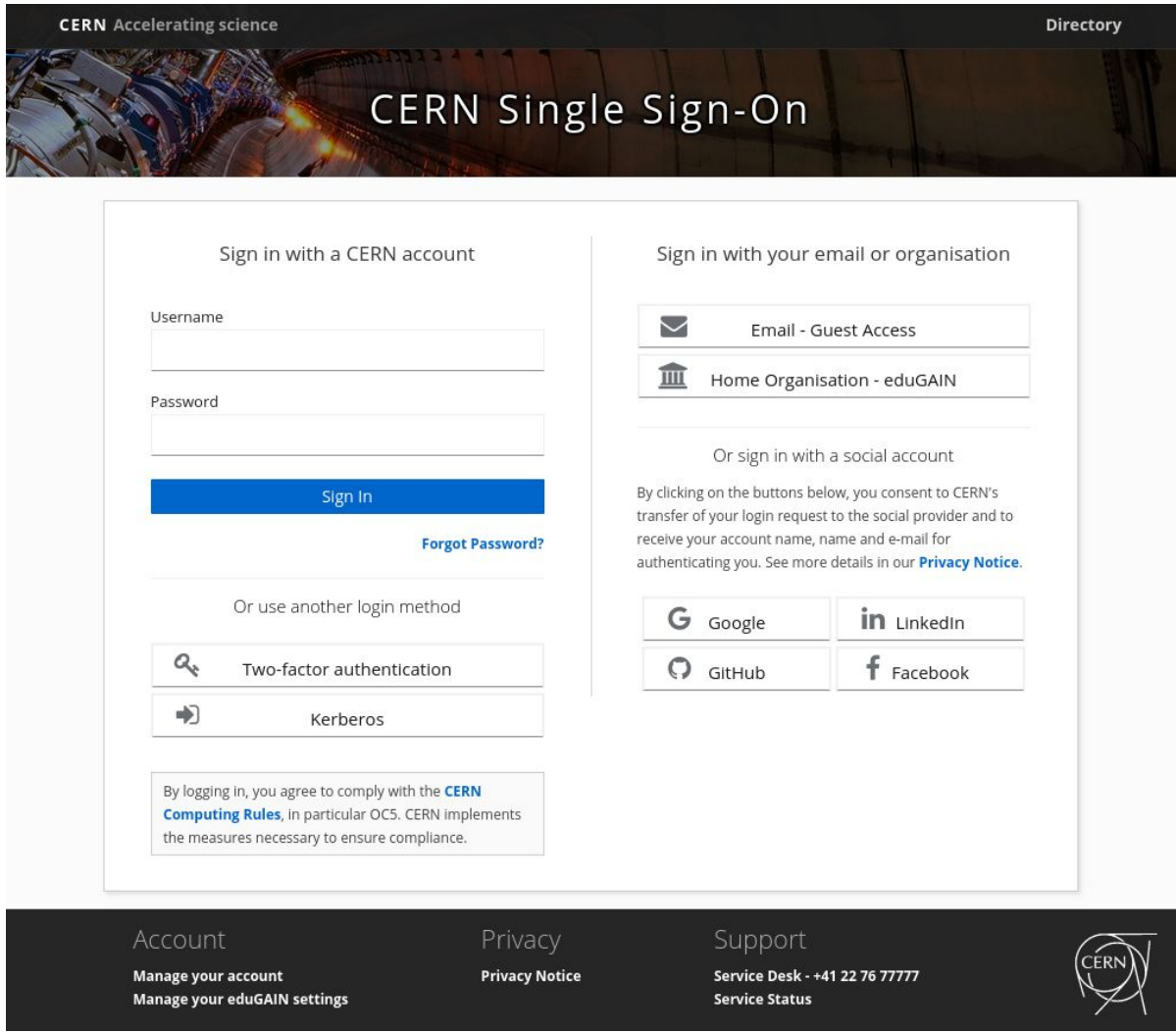
# Introduction

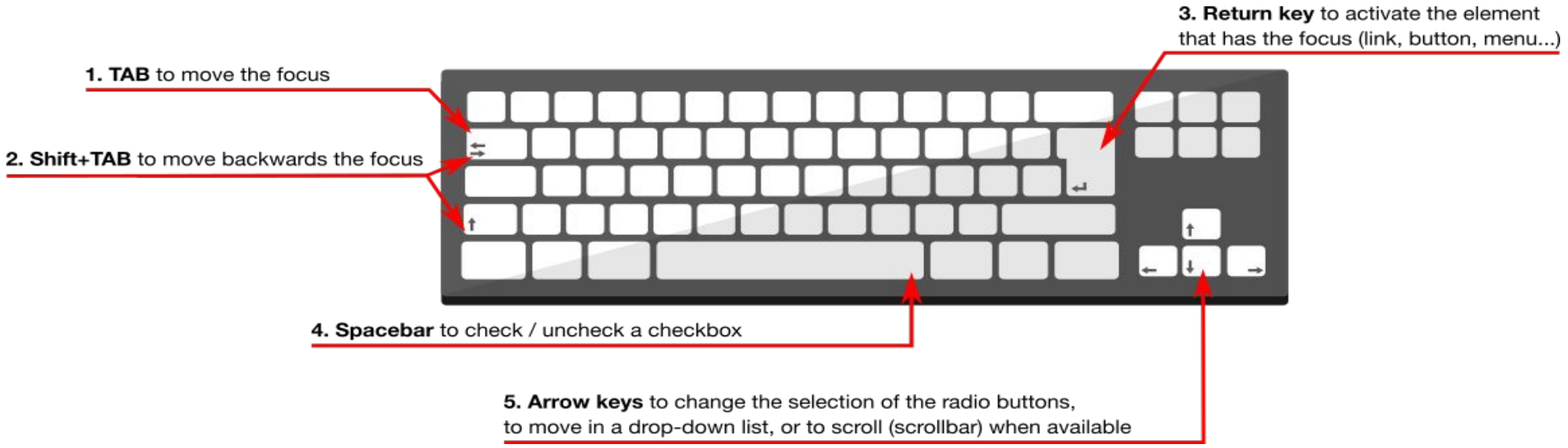
- CERN's Single Sign-On is used by thousands of laboratory staff and researchers to authenticate every day.
- At the moment it needs some improvement in terms of usability for users with disabilities such as limited vision or colour blindness, motor impairment,etc.
- In this project, we address the accessibility needs of the SSO and other related websites run by the authentication team to enhance the overall user experience for all users.



# Navigation modes

*How people with disabilities navigate websites*

- Use of keyboard e.g “tab” key




- Screen readers - communicates the content displayed in audio or braille format e.g Chrome vox, NVDA and JAWS on windows, Voiceover for Mac.
- Voice commands, etc

# Methodologies

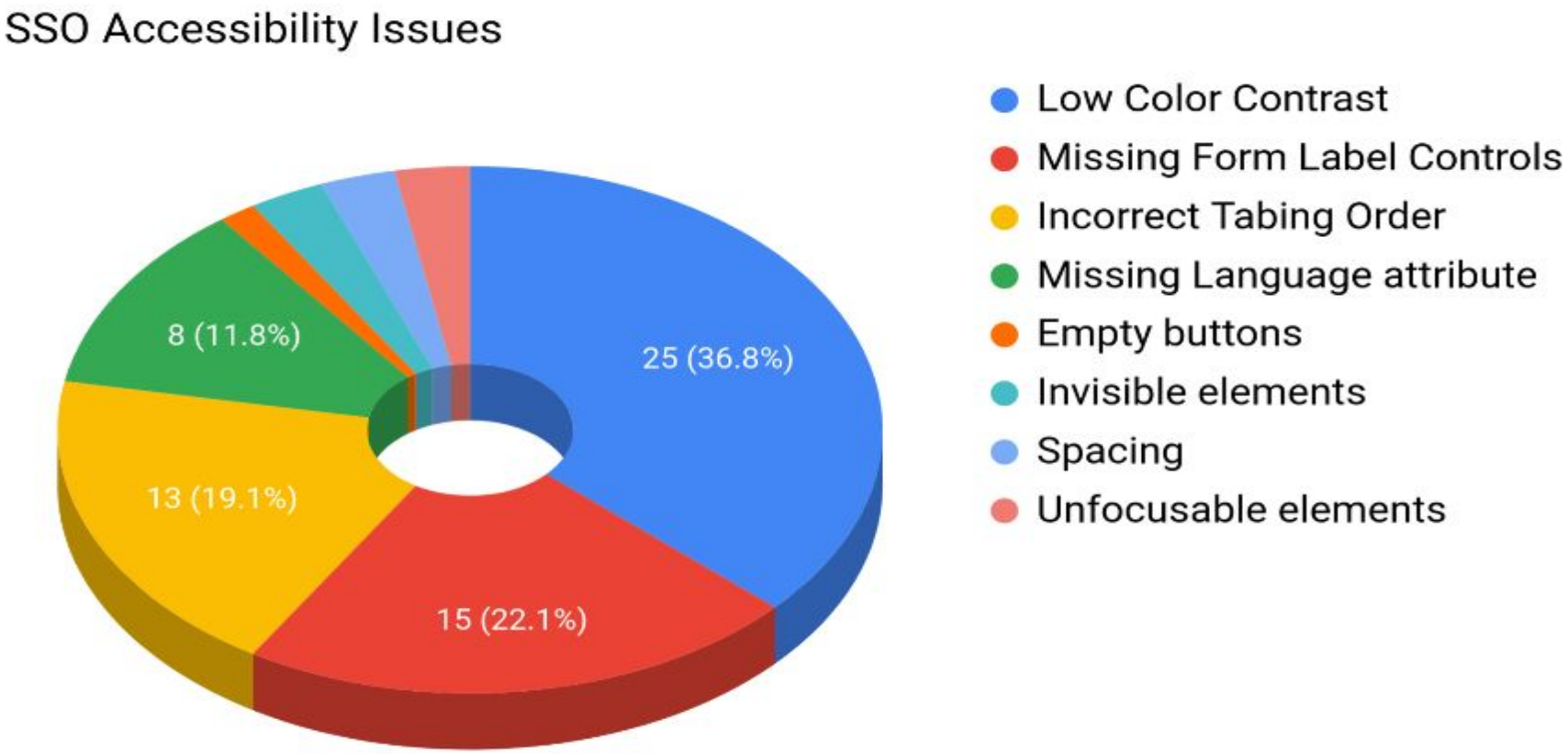
*Testing of the SSO*

- Web Content Accessibility Guidelines(level 2(AA))
  - Perceivable - provide text alternatives for any non-text content
  - Operable - all functionality available on keyboard
  - Understandable - operate and appear in predictable ways
  - Robust - maximise compatibility with assistive technologies

- Tabbing(keyboard only)
- Screen reader( listening)
- Web Accessibility Evaluation Tools (WAVE)
- Web Disability Simulator
- Manual Testers (volunteers are welcome)

# Issues found

*Issues detected on the CERN SSO (68 issues on over 10 pages)*



# Solutions

*How the issues detected were fixed(sample)*

- **Low Color Contrast**

***Increase font weight and make color darker.***

**Total Color blindness**

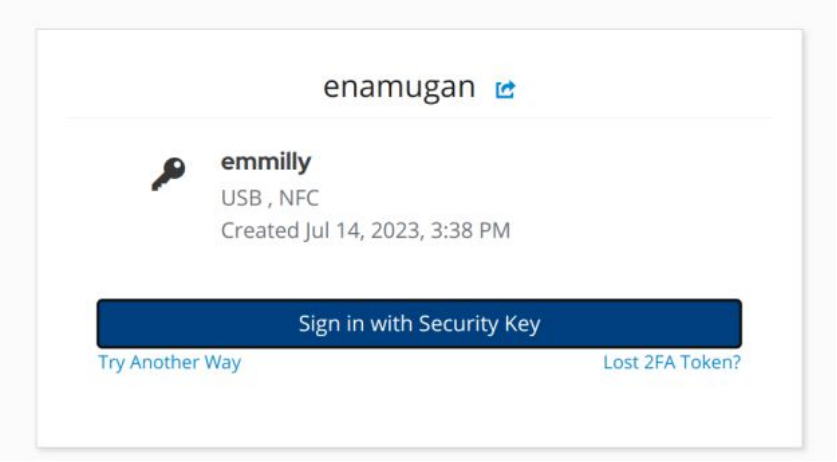
# Solutions

*How issues found were fixed*

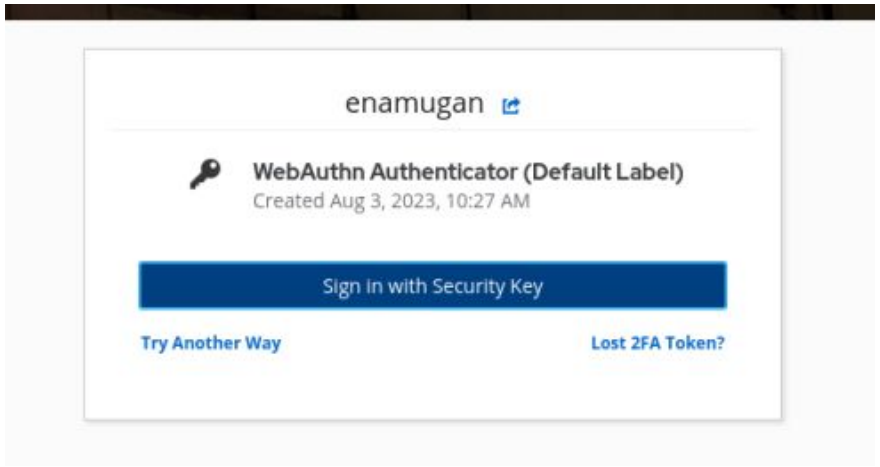
- **Missing language attributes** ***Add lang="en" to html tag***

*Indicates to the screen reader the language it should pronounce the content in.*

- **Limited Spacing**

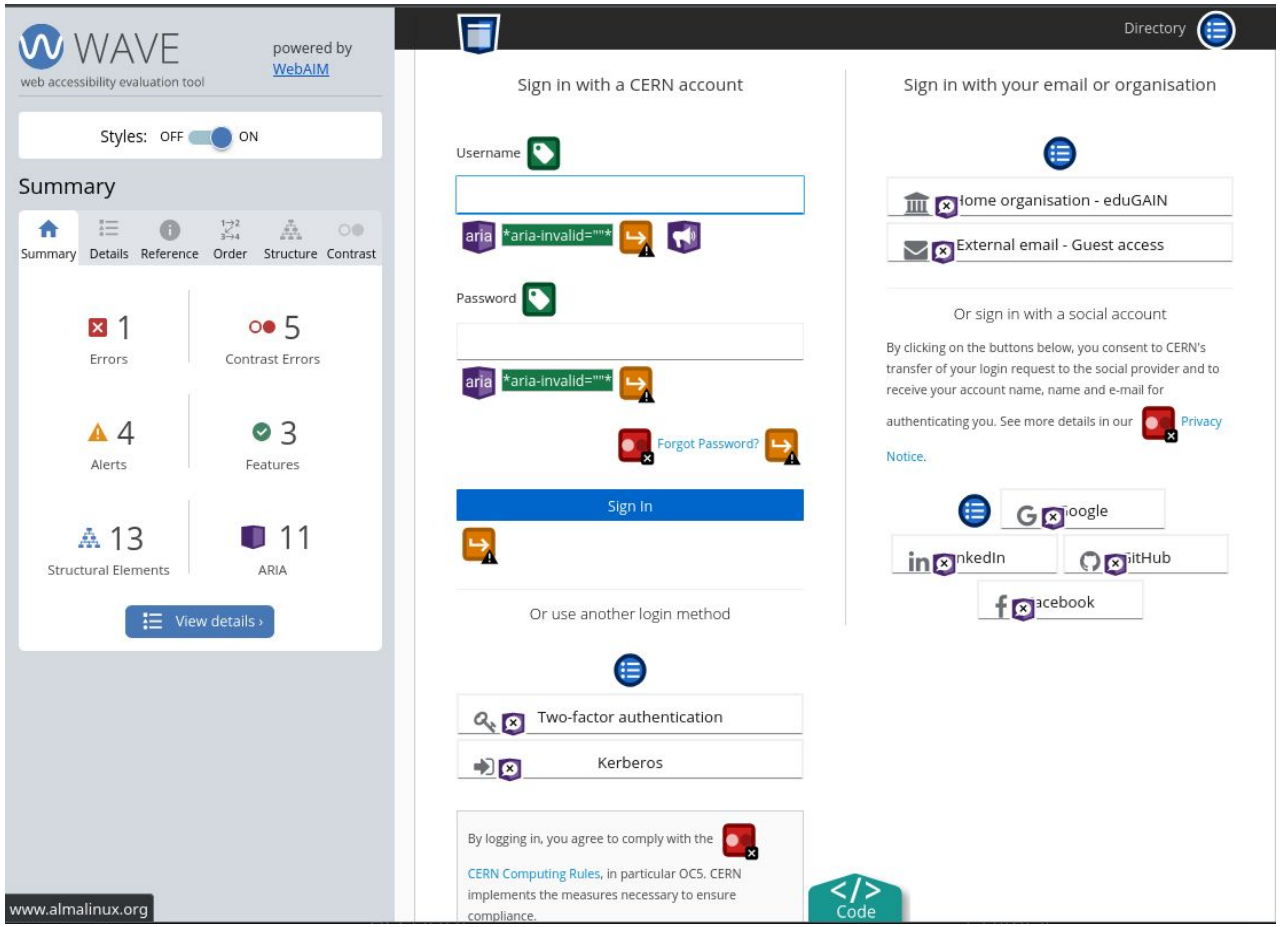



- **Spacing**

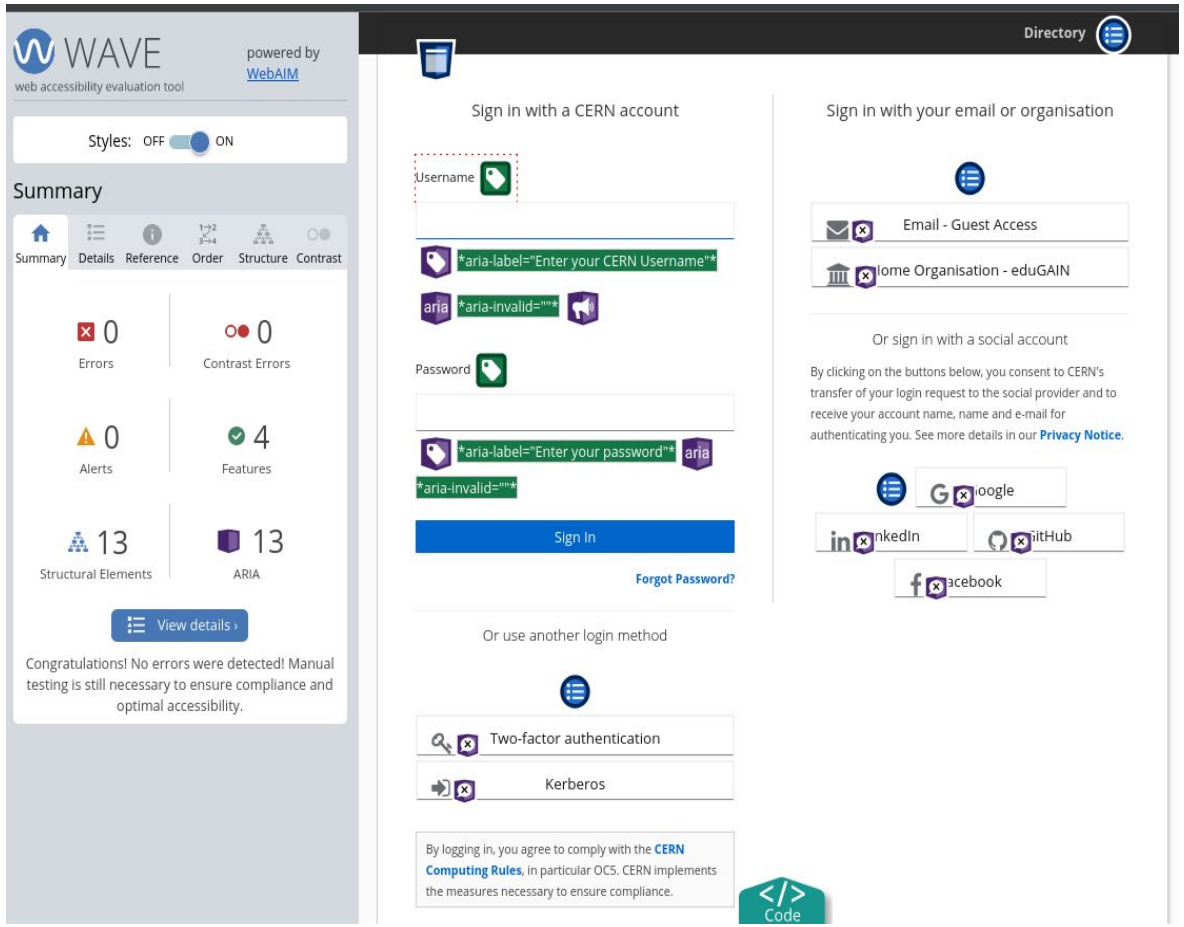


# Overall

- **Before**




- **After**



# Conclusion

- 4 issues are already in production.
- Over 56/66 issues have already  been committed to development infrastructure and will be included in production in the coming months.
- Some issues may not be visible for users without impairments, but hold significant impact for those who do, so addressing them is essential to ensuring an inclusive and accommodating experience for all users.

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# Thank you

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