# EOS GUI

Simple way for EOS management

Gregor Molan, Comtrade 360
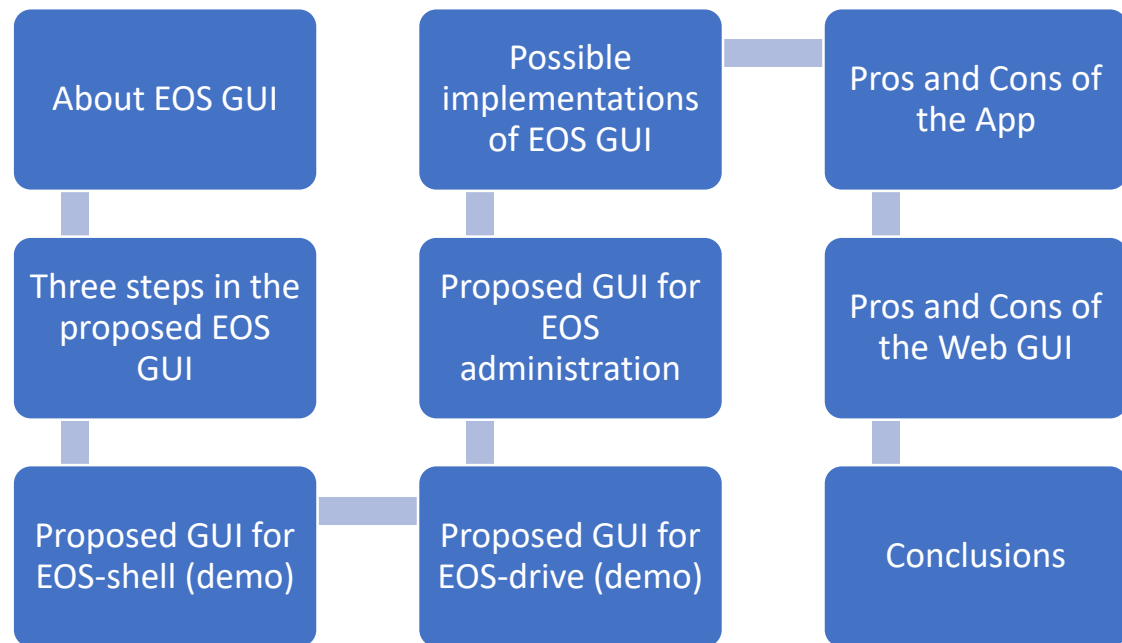Branko Blagojević, Comtrade 360
Ivan Arizanović, Comtrade 360

27 Apr 2023, 11:05

# Agenda

```
┌─────────────────┐   ┌─────────────────┐     ┌─────────────────┐
│                 │   │    Possible     │     │                 │
│  About EOS GUI  │   │ implementations │─────│ Pros and Cons of│
│                 │   │   of EOS GUI    │     │    the App      │
└─────────────────┘   └─────────────────┘     └─────────────────┘
        │                     │                       │
┌─────────────────┐   ┌─────────────────┐     ┌─────────────────┐
│ Three steps in  │   │  Proposed GUI   │     │                 │
│ the proposed EOS│   │     for EOS     │     │ Pros and Cons of│
│      GUI        │   │ administration  │     │  the Web GUI    │
└─────────────────┘   └─────────────────┘     └─────────────────┘
        │                     │                       │
┌─────────────────┐   ┌─────────────────┐     ┌─────────────────┐
│  Proposed GUI   │   │  Proposed GUI   │     │                 │
│  for EOS-shell  │───│  for EOS-drive  │     │   Conclusions   │
│    (demo)       │   │     (demo)      │     │                 │
└─────────────────┘   └─────────────────┘     └─────────────────┘
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# About EOS GUI

EOS cluster mounted as Windows drive letter

**01**

## EOS-shell

Smart interface to EOS commands
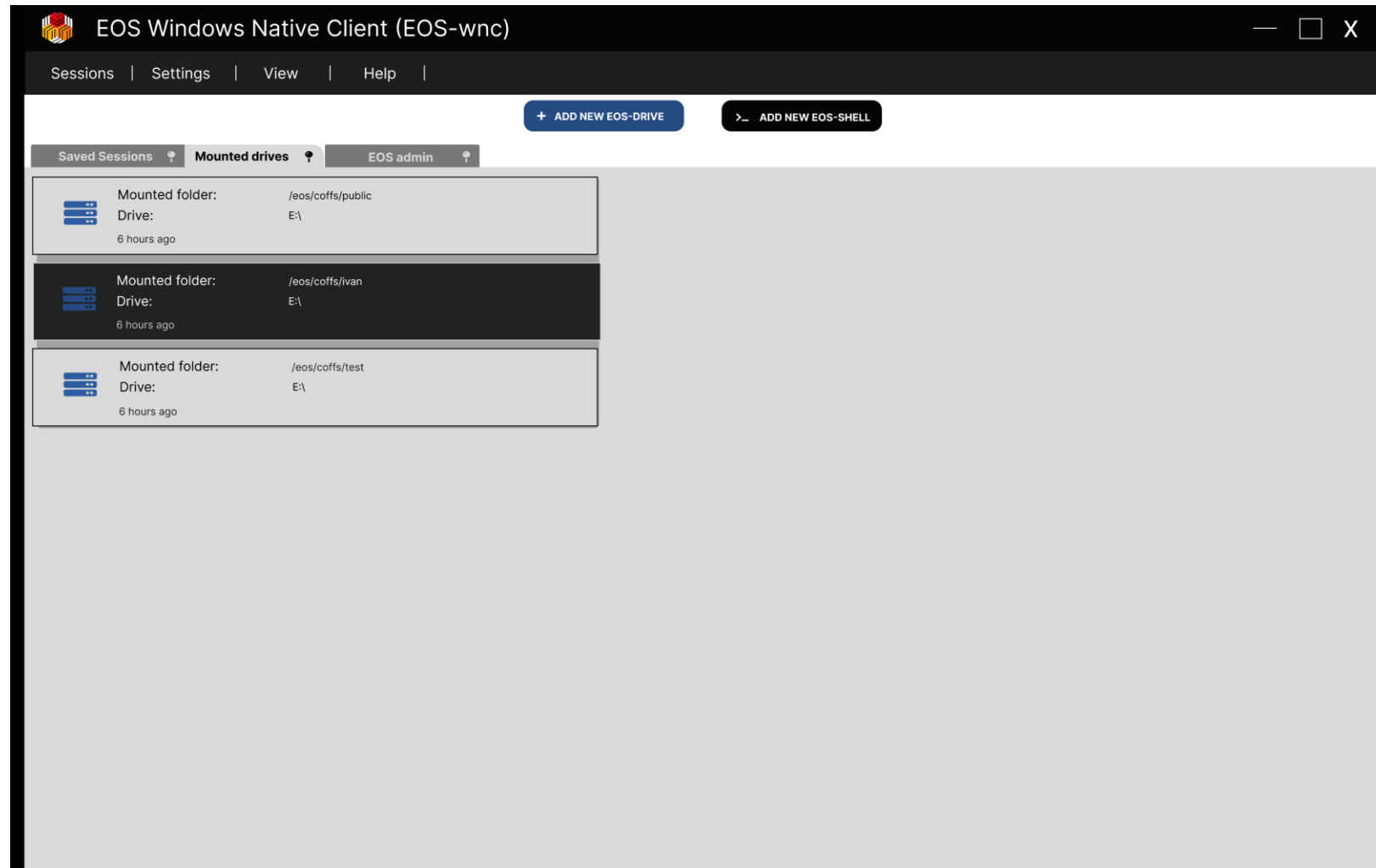
**02**

## EOS-drive

EOS cluster mounted as Windows drive letter

**03**

## EOS-app

All functionalities of EOS presented as GUI

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# Proposed GUI for EOS-shell (demo)
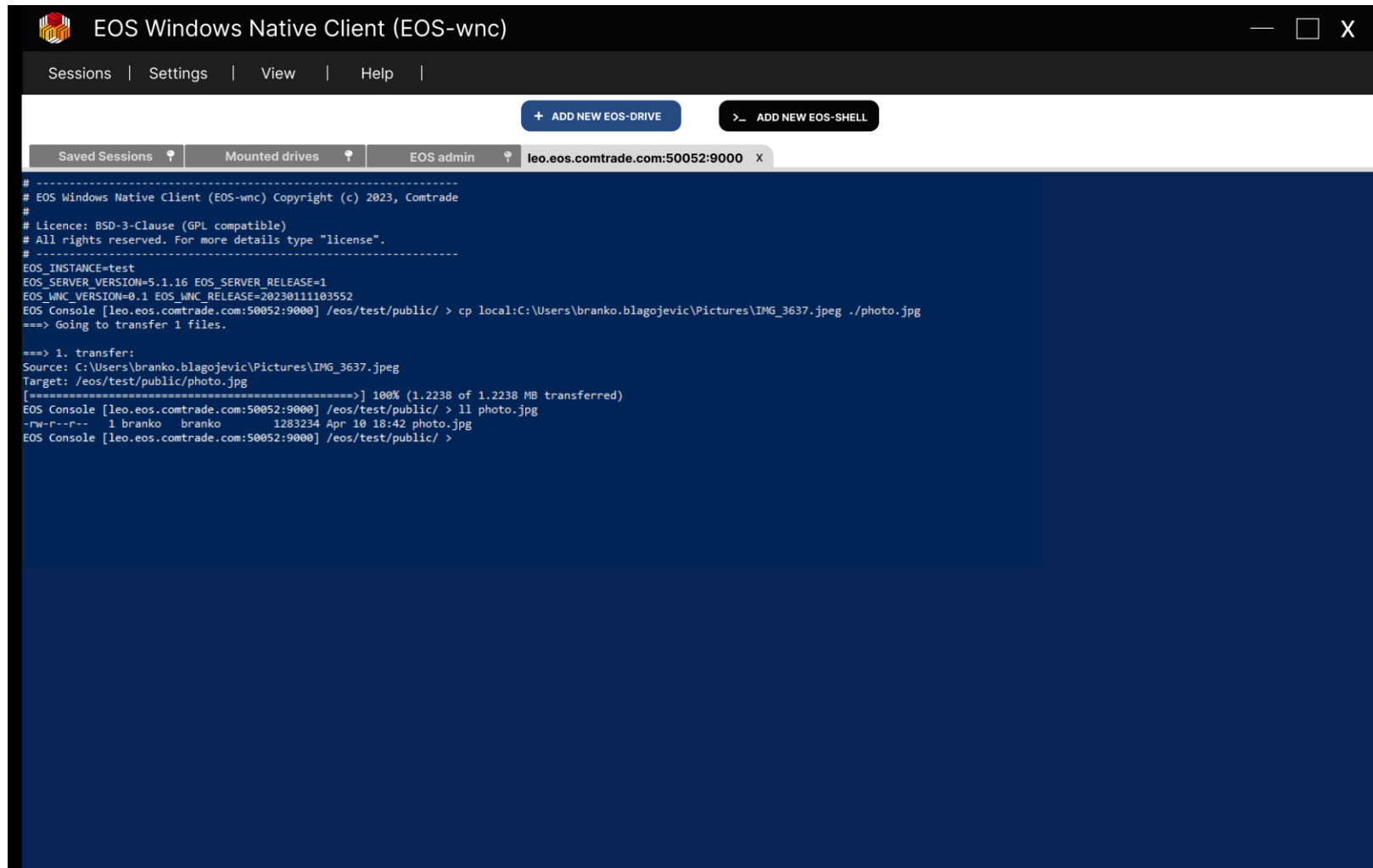
# Proposed GUI for EOS-drive (demo)

# Proposed GUI for EOS administration

**Access**
*Client access*

**Namespace**
*Namespace operations*

**Virtualization**
*Fault tolerance and balancing*

**Security-Access**
*Security and access*

**Geo-scheduling**
*Geo-scheduling and balancing*

**Scaling**
*Large-scale env*

**Plugins**
*Plugins and XRootD*

**Migration**
*Upgrades and Migration*
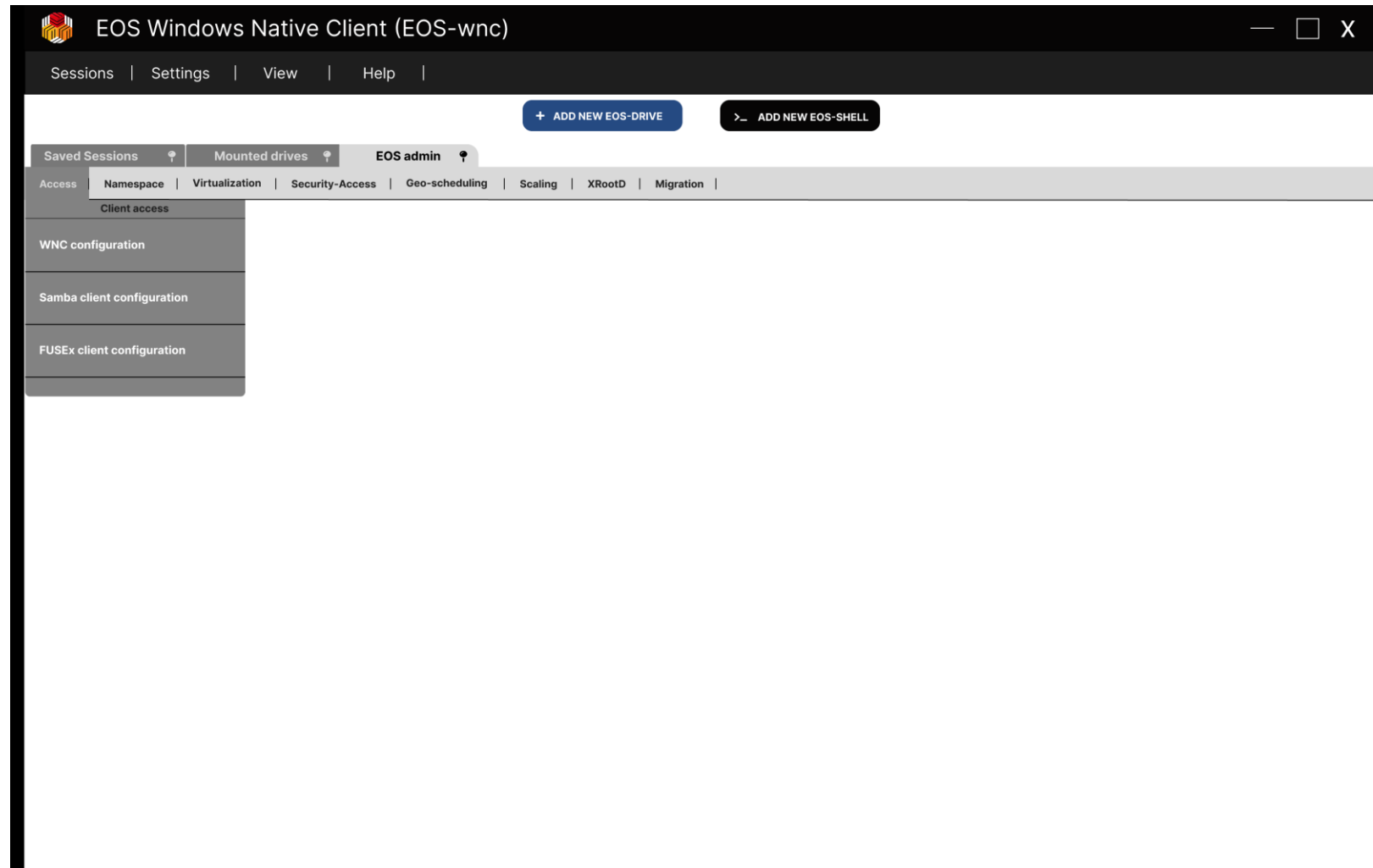
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# Proposed GUI for EOS administration (demo)

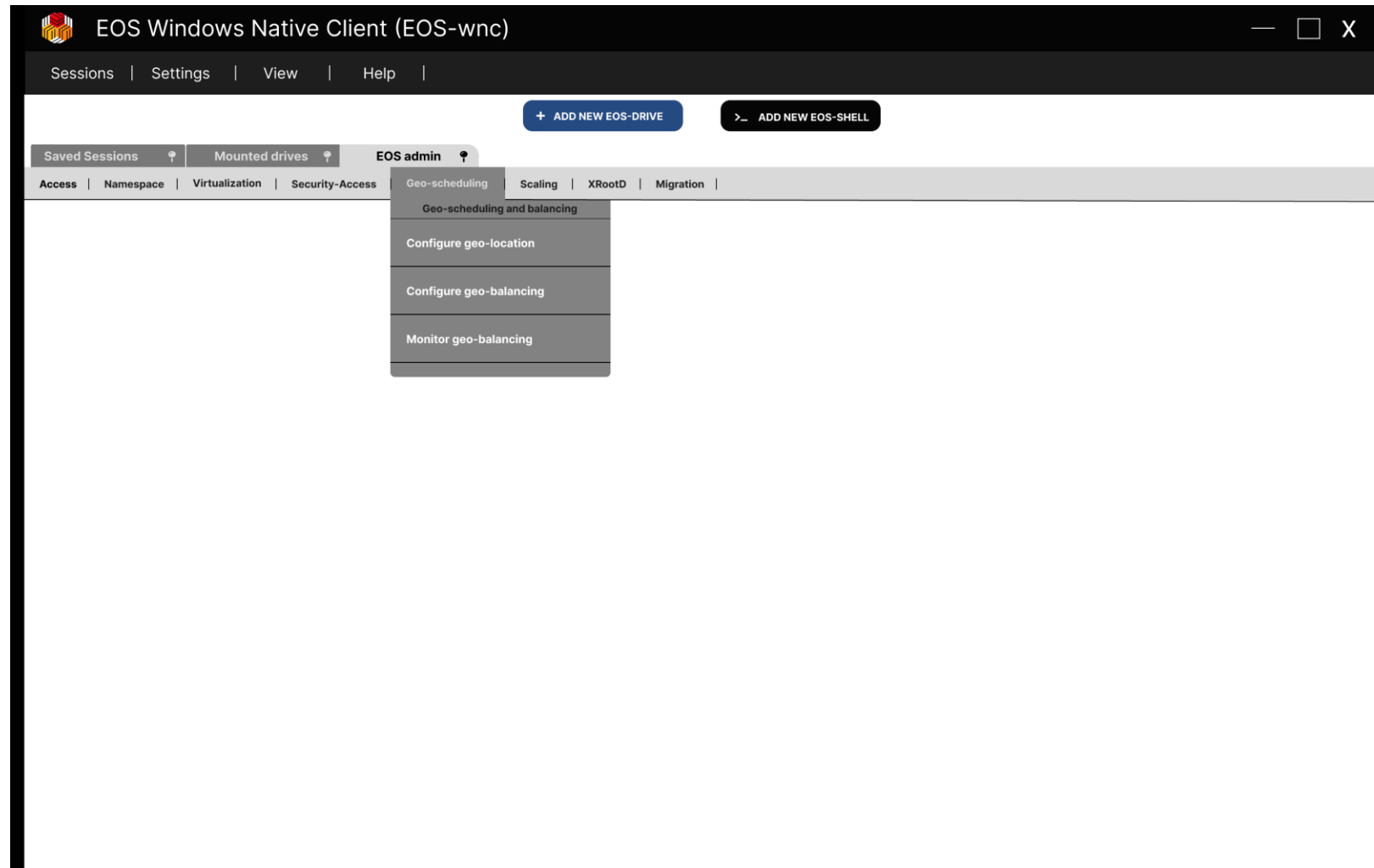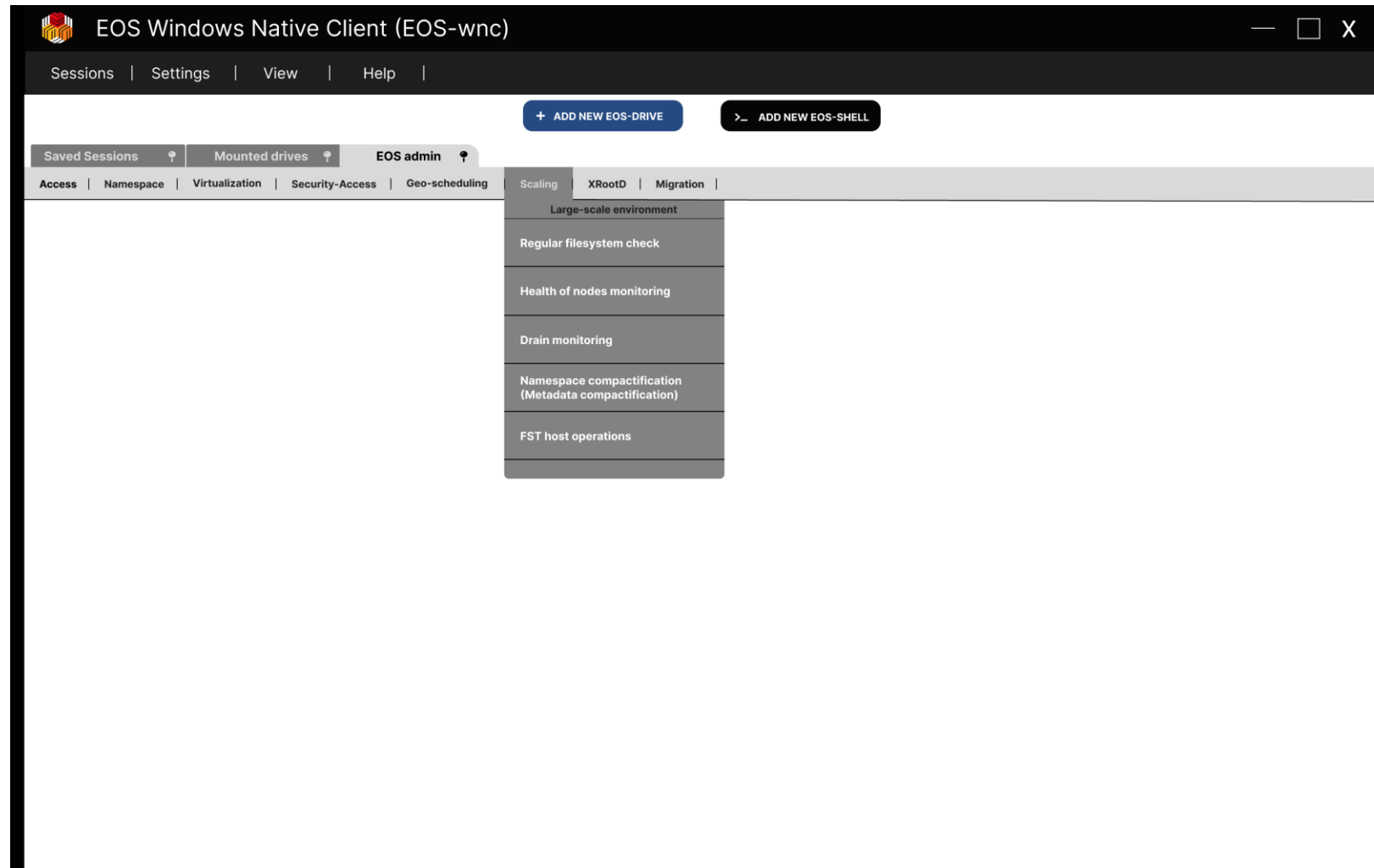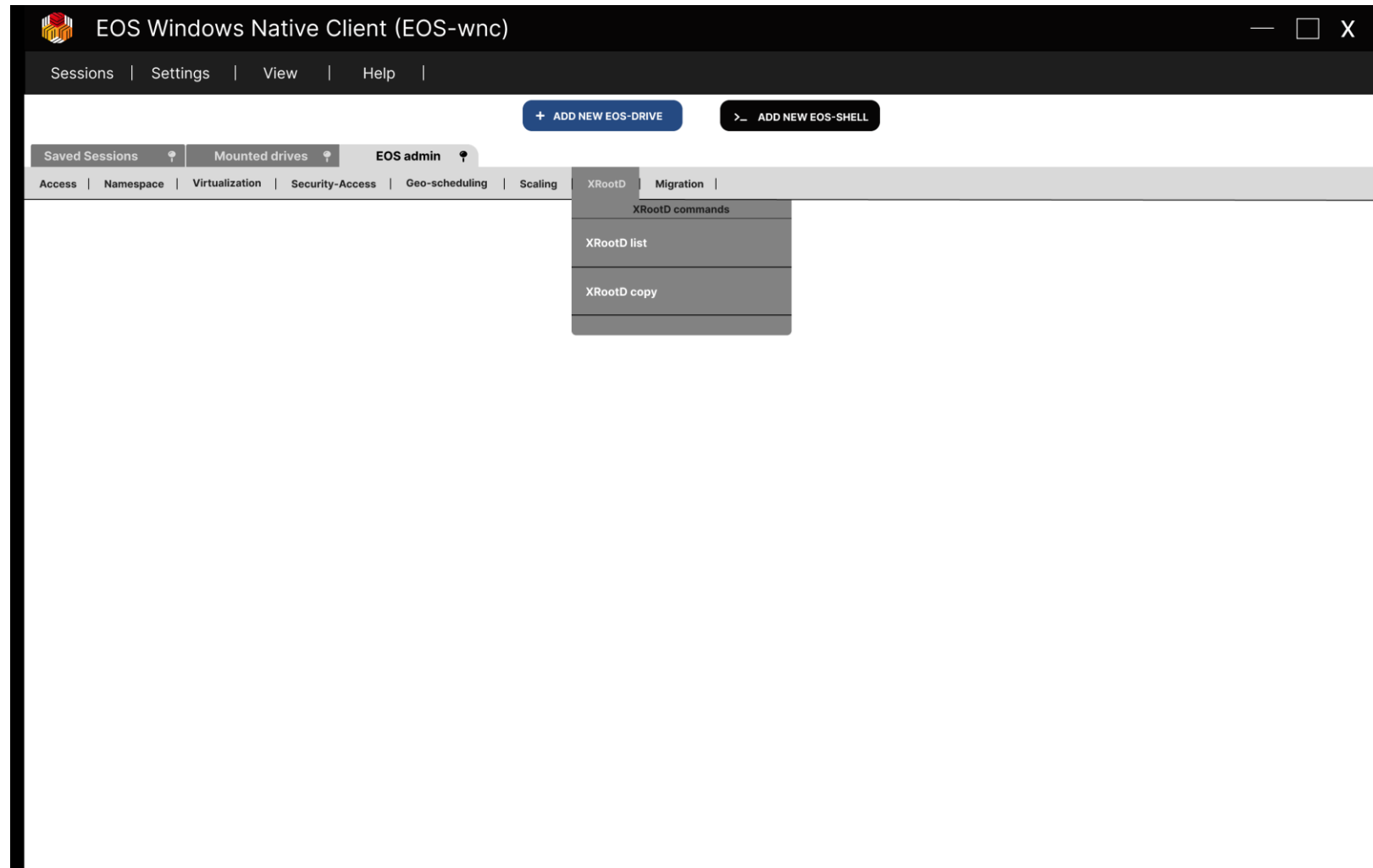CERN EOS Workshop 2023, Gregor Molan, Comtrade

# Proposed GUI for EOS administration (demo)

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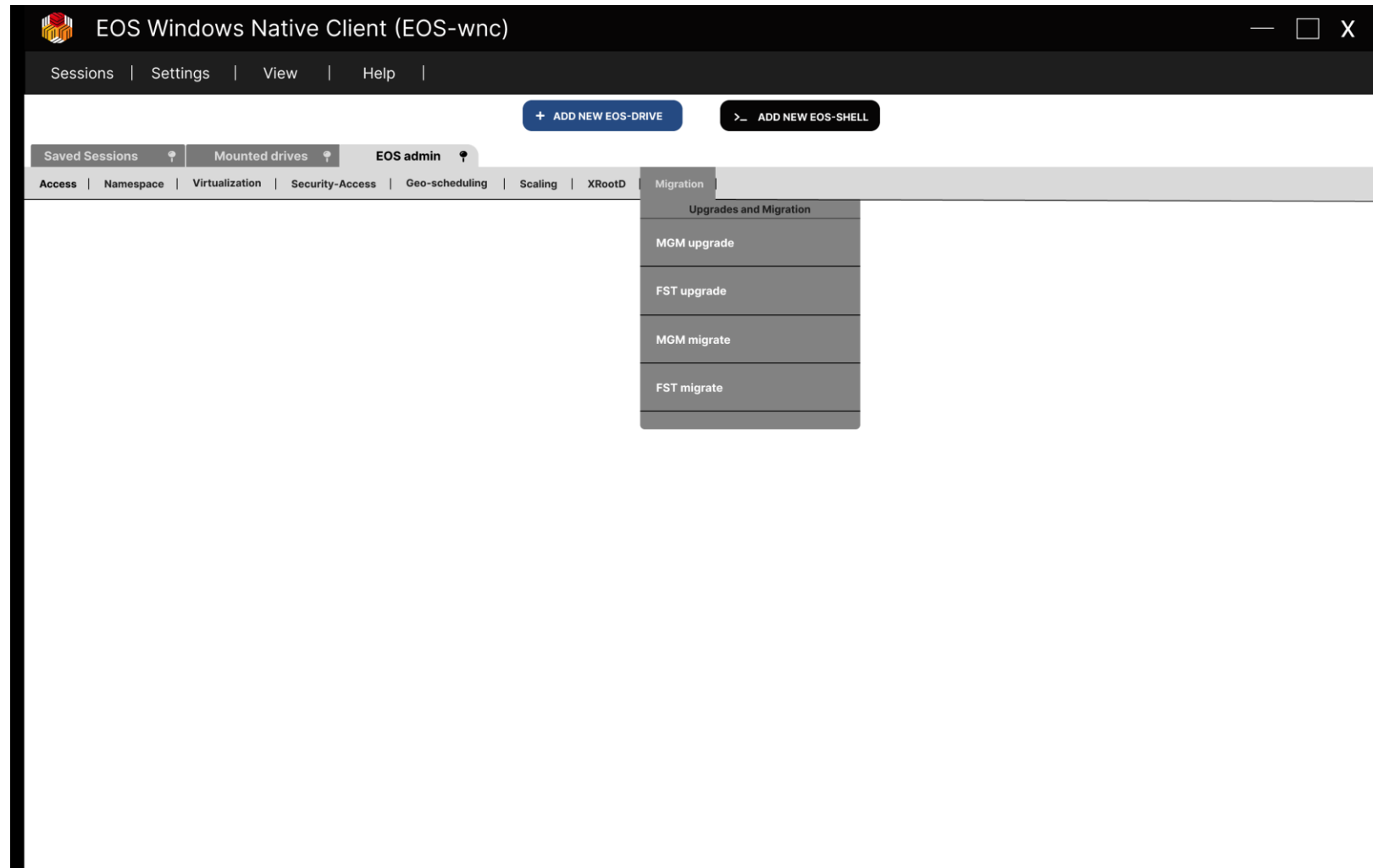CERN EOS Workshop 2023, Gregor Molan, Comtrade

# Proposed GUI for EOS administration (demo)

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# Proposed GUI for EOS administration (demo)

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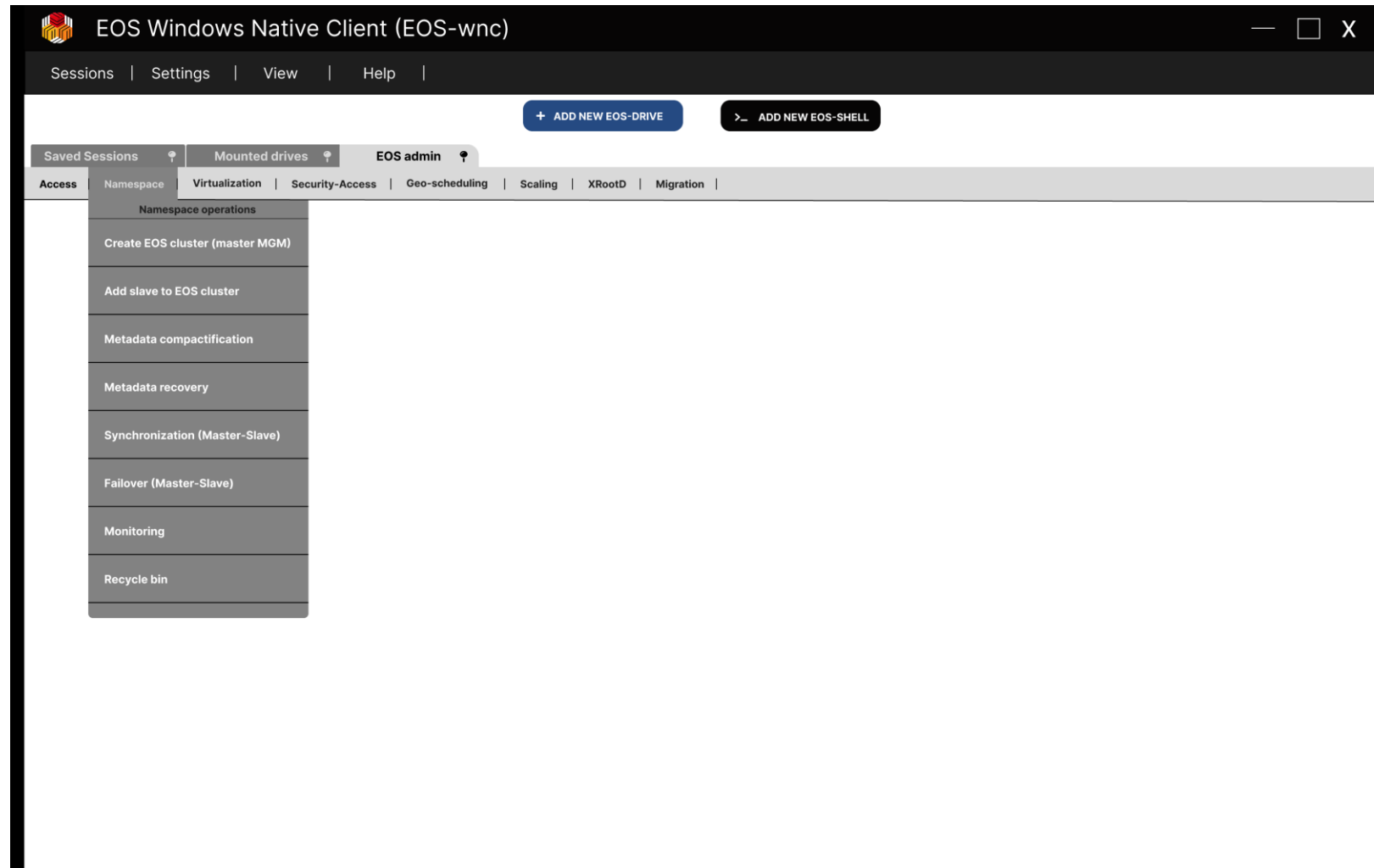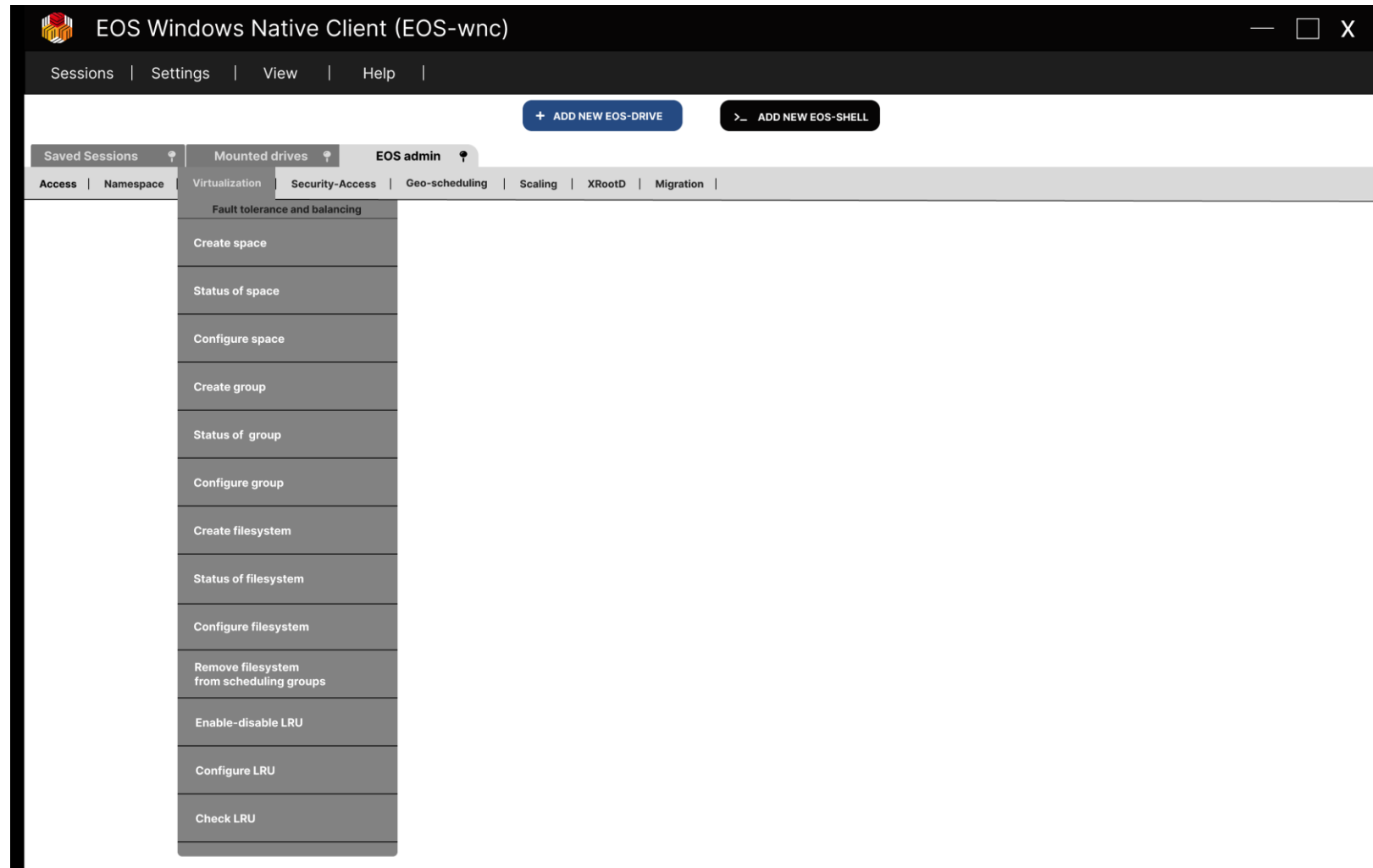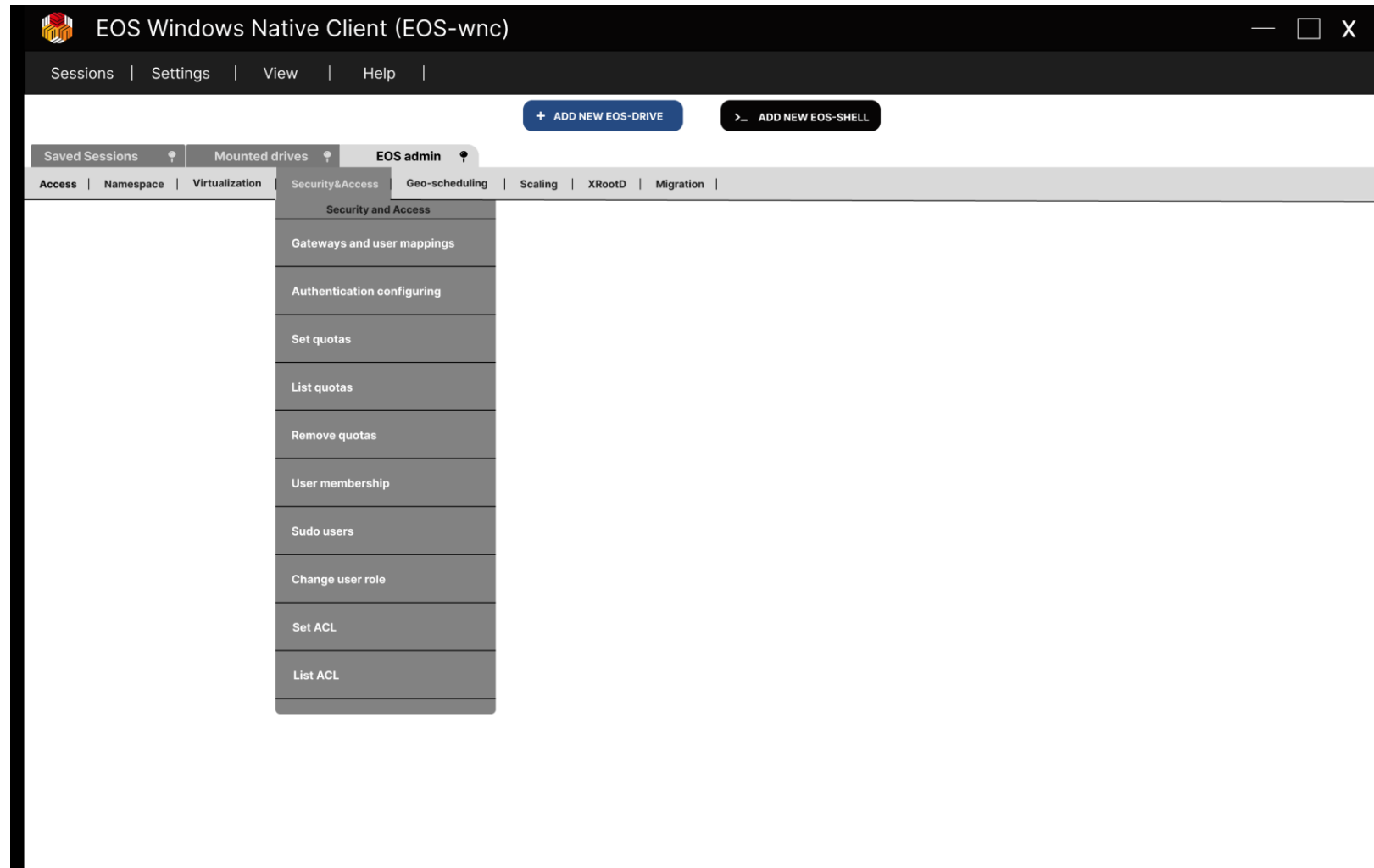
# Proposed GUI for EOS administration (demo)

# Possible implementations of EOS GUI
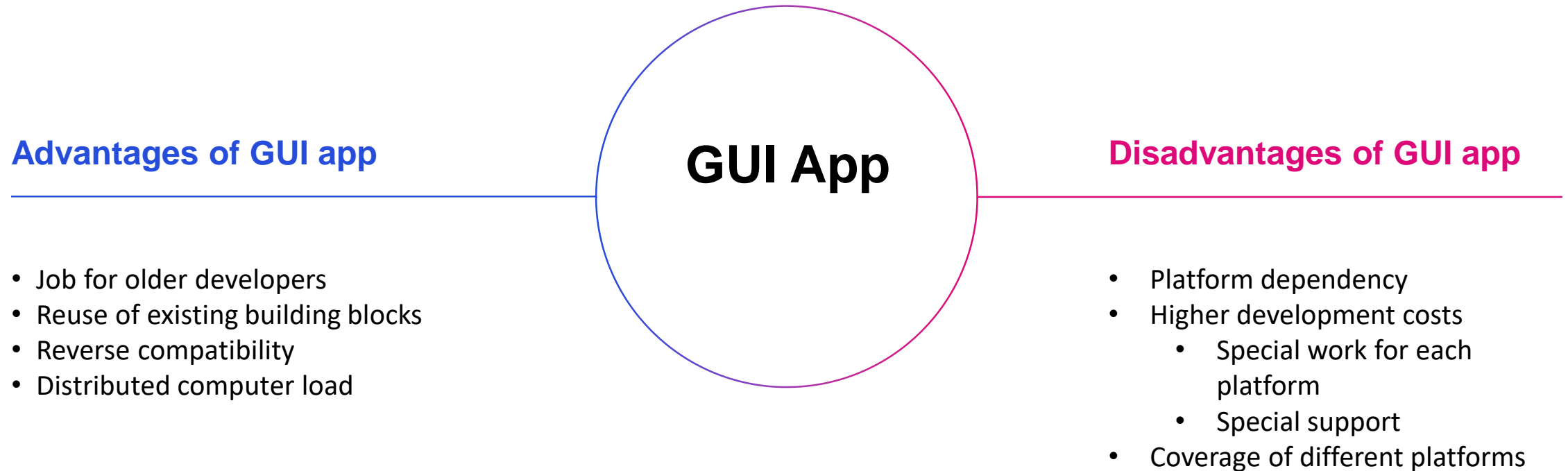
## GUI application

- Application software
- Notebook interface
- Virtual reality
- Application running on client host: Qt, iOS SDK, .Net

## Web application

- Rich web application: Java applet, JavaFX, JavaScript, TypeScript
- Progressive Web Application
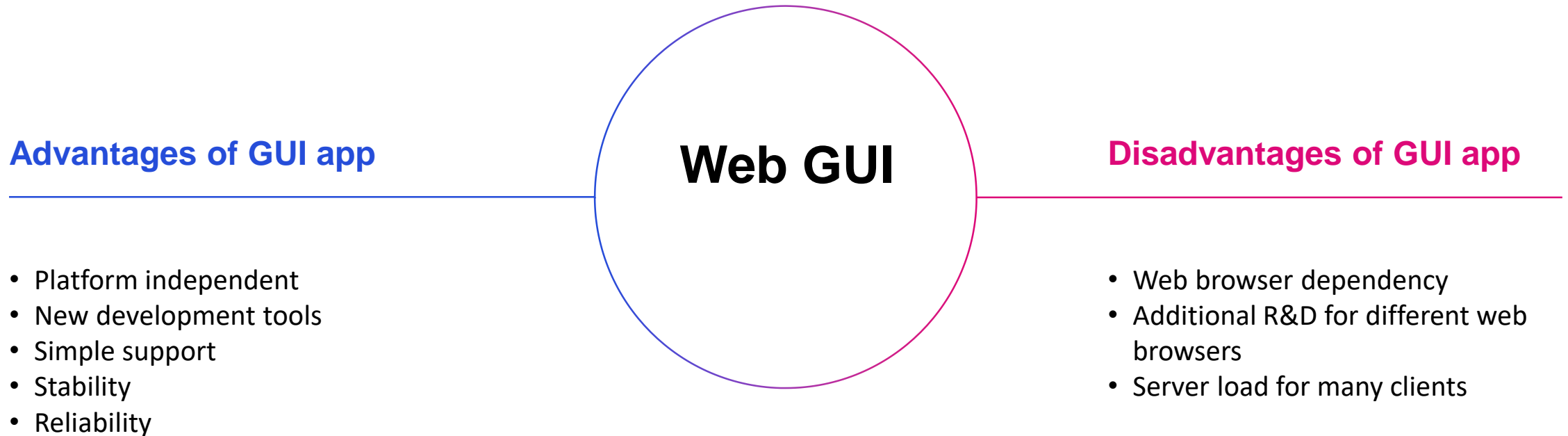- Older application: Rich Web Application

# Pros and Cons of the GUI App

Overview of advantages and disadvantages of the EOS GUI implemented as an application

**Advantages of GUI app**

**GUI App**

**Disadvantages of GUI app**

- Job for older developers
- Reuse of existing building blocks
- Reverse compatibility
- Distributed computer load

- Platform dependency
- Higher development costs
  - Special work for each platform
  - Special support
- Coverage of different platforms

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# Pros and Cons of the Web GUI

Overview of advantages and disadvantages of the EOS GUI implemented as
a web application on a server

**Web GUI**

## Advantages of GUI app

- Platform independent
- New development tools
- Simple support
- Stability
- Reliability

## Disadvantages of GUI app

- Web browser dependency
- Additional R&D for different web browsers
- Server load for many clients

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# Conclusions

- EOS GUI is not a replacement for EOS CLI
- Goals for EOS GUI
  - The main goal: popularization of EOS
  - The secondary goal: an overview of EOS features

- Proposed steps
  - Prepare the prototype of the EOS GUI
  - Development of web application

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# Thank you

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