

# ScummVM Architecture Enhancement

Presented by Jacob McMullen and Reid Stobo

<https://youtu.be/XqpOGOvbbtQ>



Evan Kreutzwiser



Mike Stefan



Ryan Jacobson  
(Group Leader)



Jacob McMullen



Kashan Rauf



Reid Stobo



**Team Orangutan 1F9A7**

# ZOOM PLATFORM

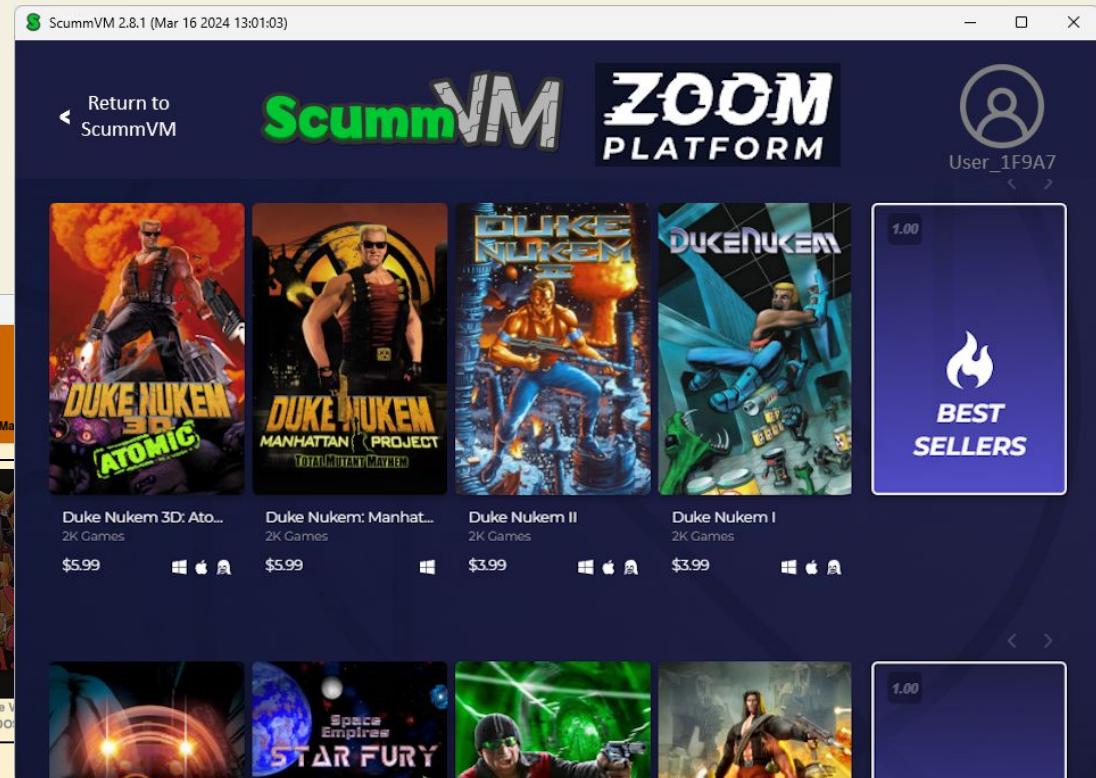
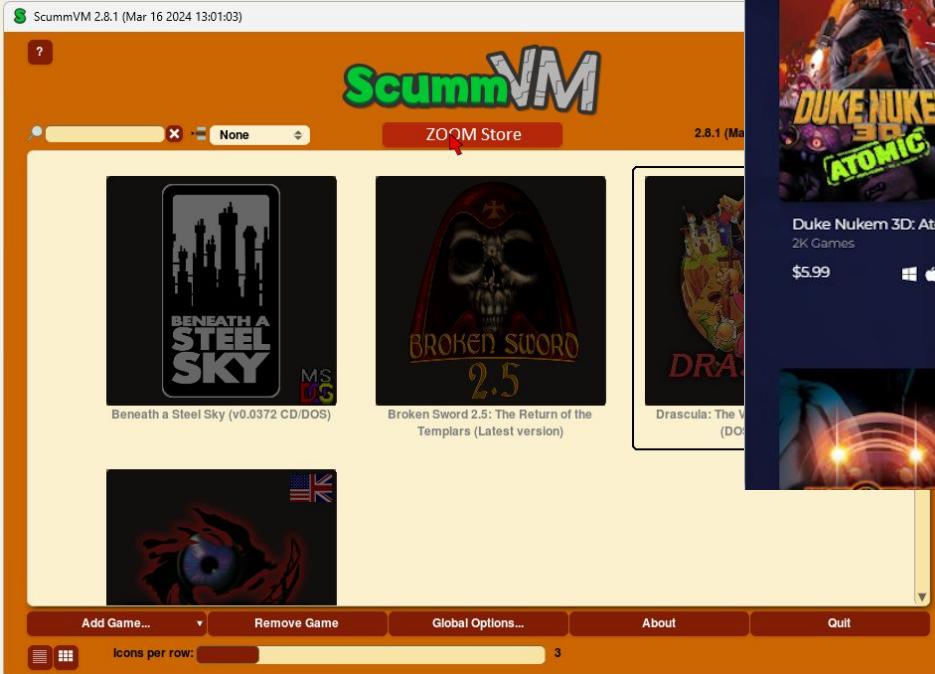
The screenshot shows the Zoom Platform website's homepage. At the top, there is a navigation bar with links for Games, News, Merch Store, Contact, About Us, a search bar, and user account options (Login, Register, Cart with 0 items). Below the navigation is a large banner for the game "FlatOut: Ultimate Carnage". The banner features two cars, one yellow and one orange, crashing into each other with sparks flying. The game title is prominently displayed in the center of the crash. A price tag of "\$19.99" is visible in the bottom left corner of the banner. In the bottom right corner of the banner, there is a logo for "Strategy First". Below the banner, there are several smaller game thumbnails, including Duke Nukem and Commandos Strike Force.

**735**  
OFFICIALLY  
LICENSED GAMES

ALWAYS  
DRM FREE

SAFE &  
SECURE  
CHECKOUT

# Proposed Enhancement: Integrated ZOOM Storefront



ZOOM Storefront opens  
from within ScummVM

# Stakeholders



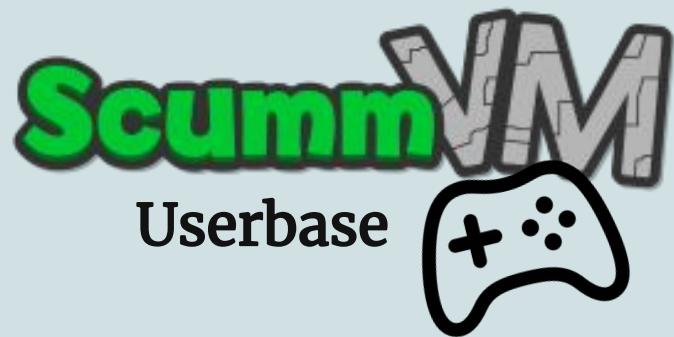
- Volunteer developers
- Designed ScummVM to be highly modular
- Care most about modifiability and scalability

# Stakeholders



- Retro game marketplace
- Proposed enhancement serves as a new market avenue
- Care most about supportability and security

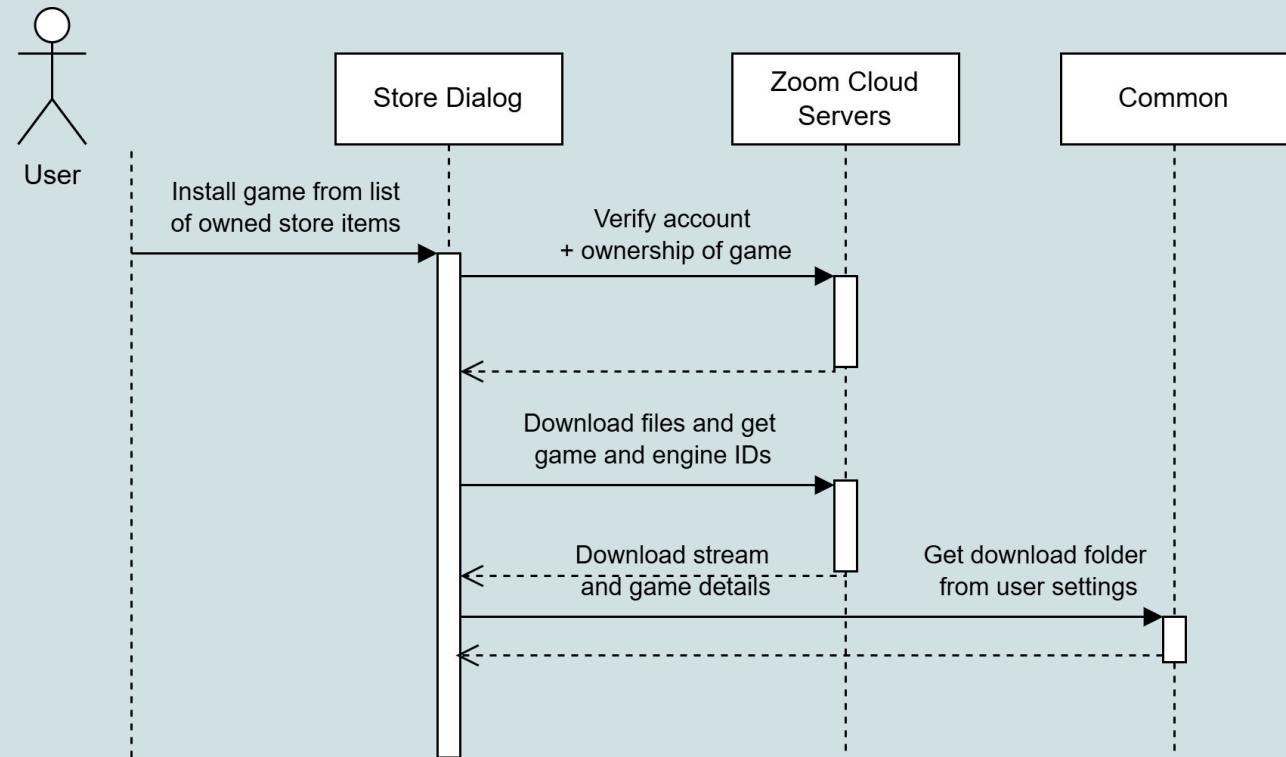
# Stakeholders



- Diverse userbase
- Accesses many different games on many different operating systems
- Care most about availability, and portability

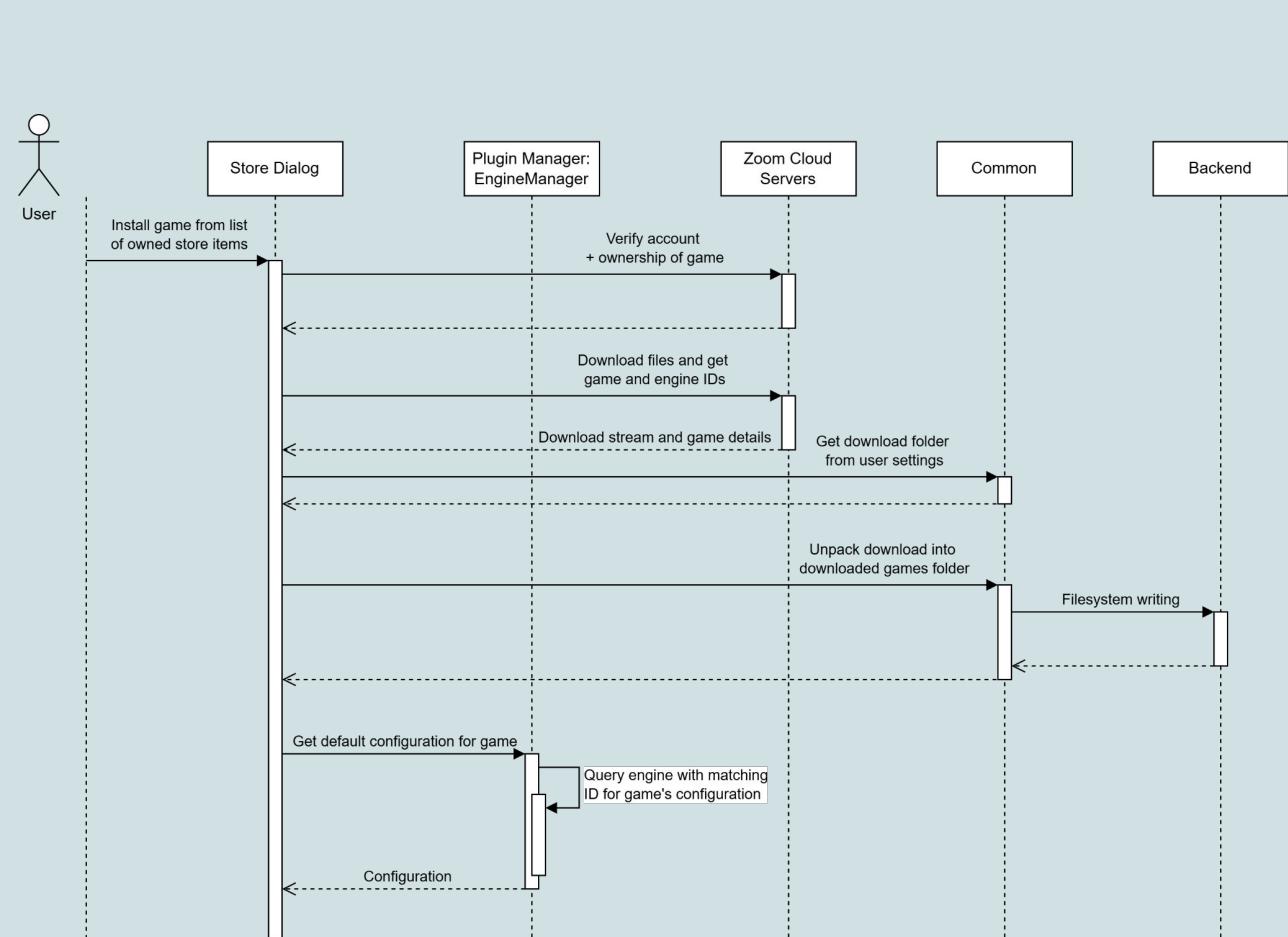
# Use Case: Installing Game from Store

- Communication between ScummVM Store and ZOOM servers
- Common storage of user settings



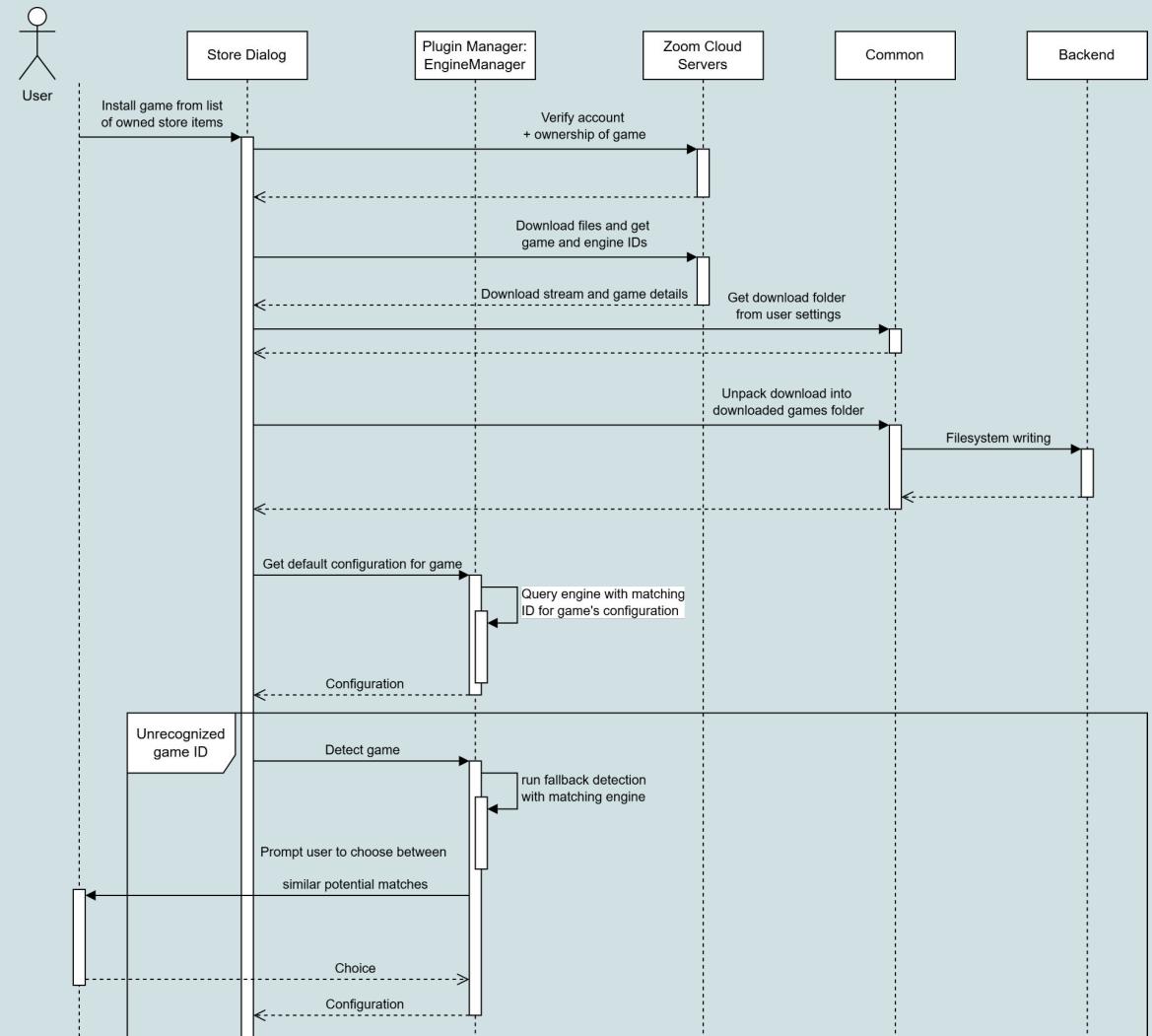
# Use Case: Installing Game from Store

- Place game data in the correct location
- Load default config. on behalf of user



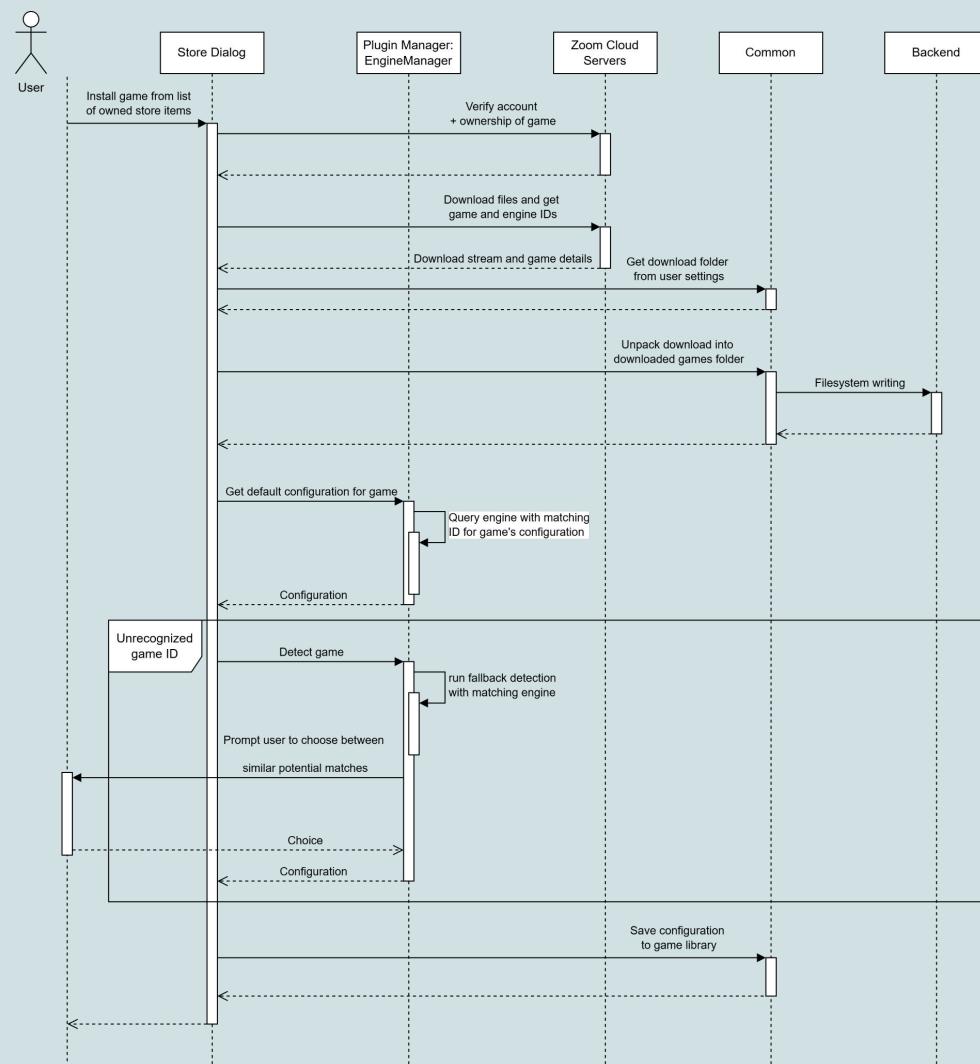
# Use Case: Installing Game from Store

- If game unrecognised, use fallback detection
- Allow user final decision to confirm correct detection

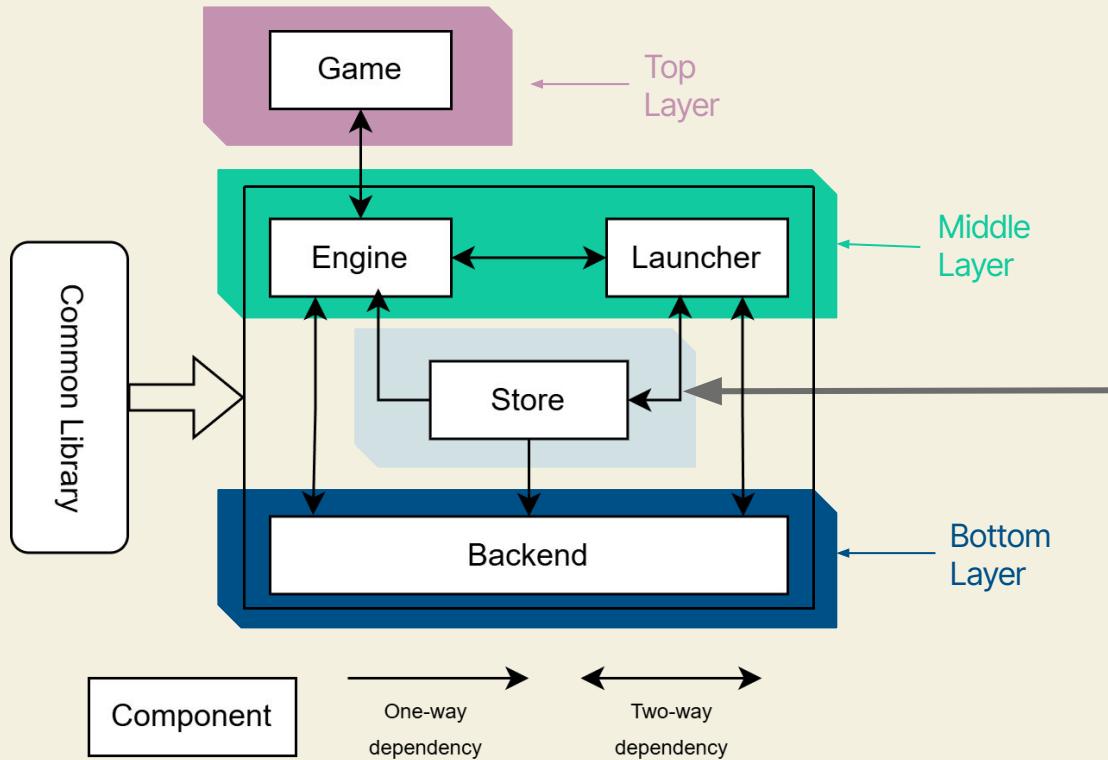


# Use Case: Installing Game from Store

- Save config. to common
- Game is in users library, ready for launch



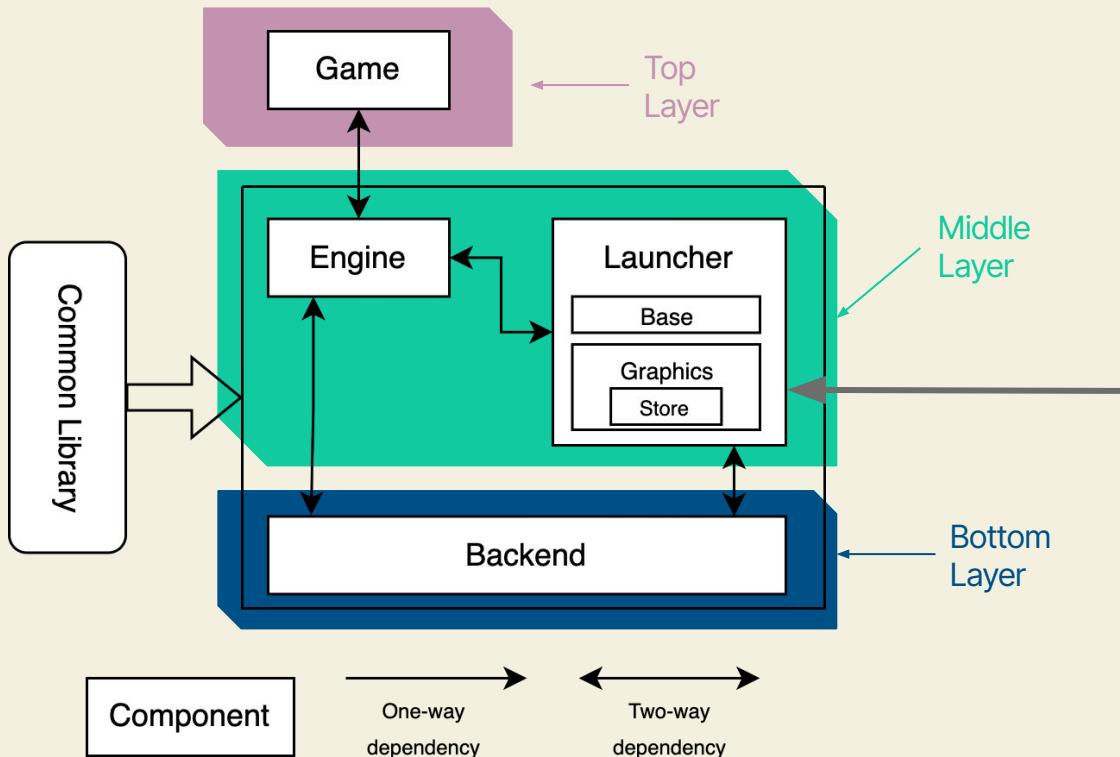
# Implementation 1: Storefront as Top-Level Component



Is the Store component part of the **middle layer**, or its own **in-between layer**?

Does it overcomplicate the layered architectural style?

# Implementation 2: Storefront as GUI Subcomponent



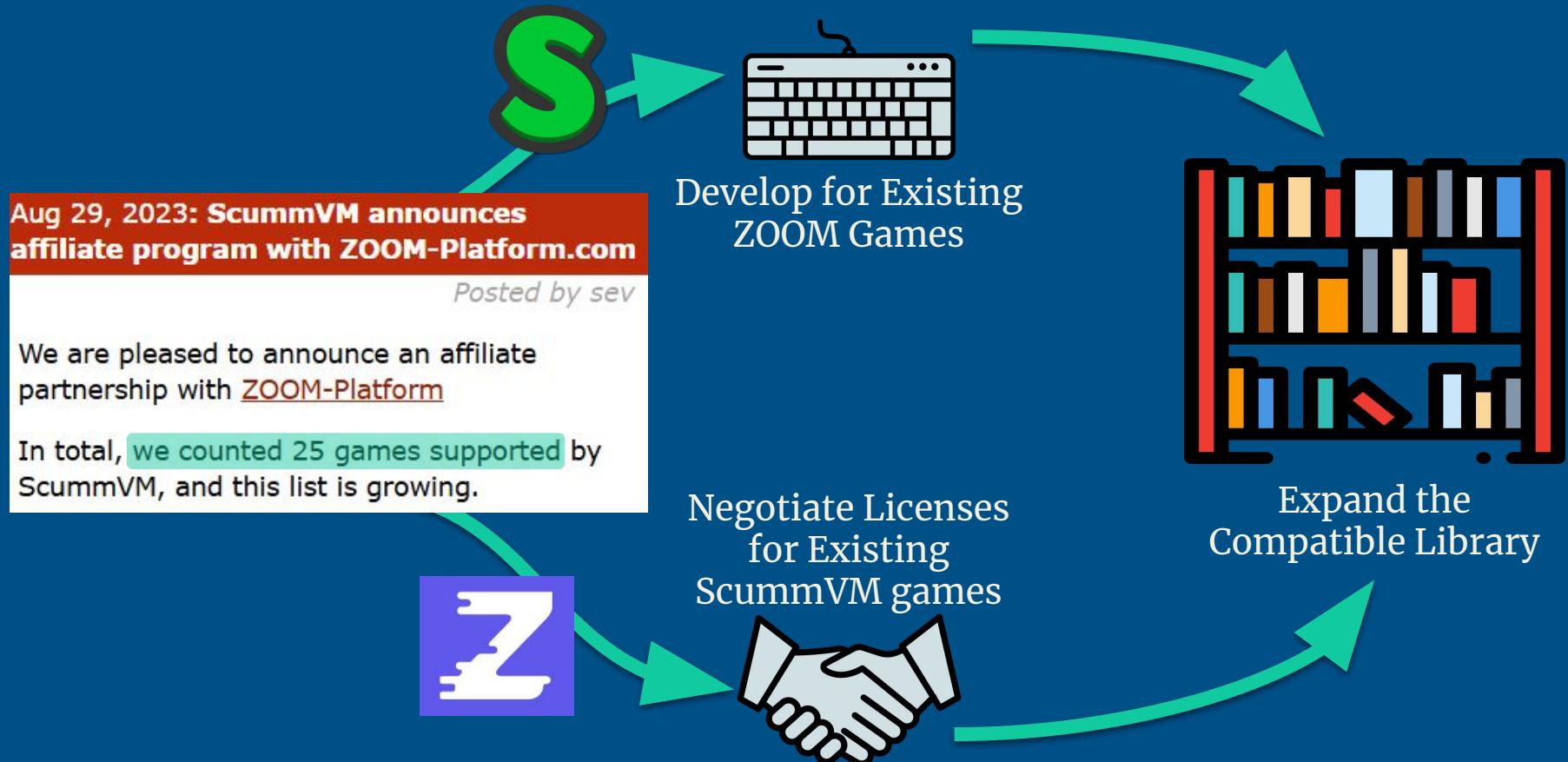
We have preserved the **layered architectural style**. But have we made the launcher component too bloated?

# Risk: Instability of Partnership

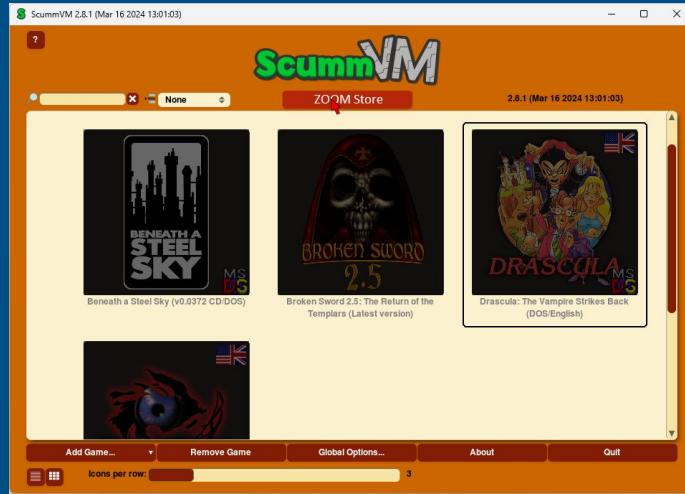


**ZOOM**  
PLATFORM

# Limitation: Small Compatible Library



# Risk: Introduction of Security Vulnerabilities



Payment Data



User Data

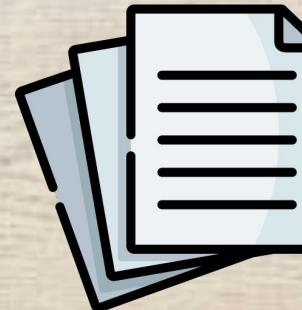
Sensitive user data must not  
be vulnerable through this  
new integration

# Plans for Testing



Unit tests for Systems  
which Support  
Storefront

- Test functionality of each component
- Test relations between components and storefront



Integration and  
End-to-End Tests

- Included in each set of unit tests
- Tests the various use cases found within system and enhancement



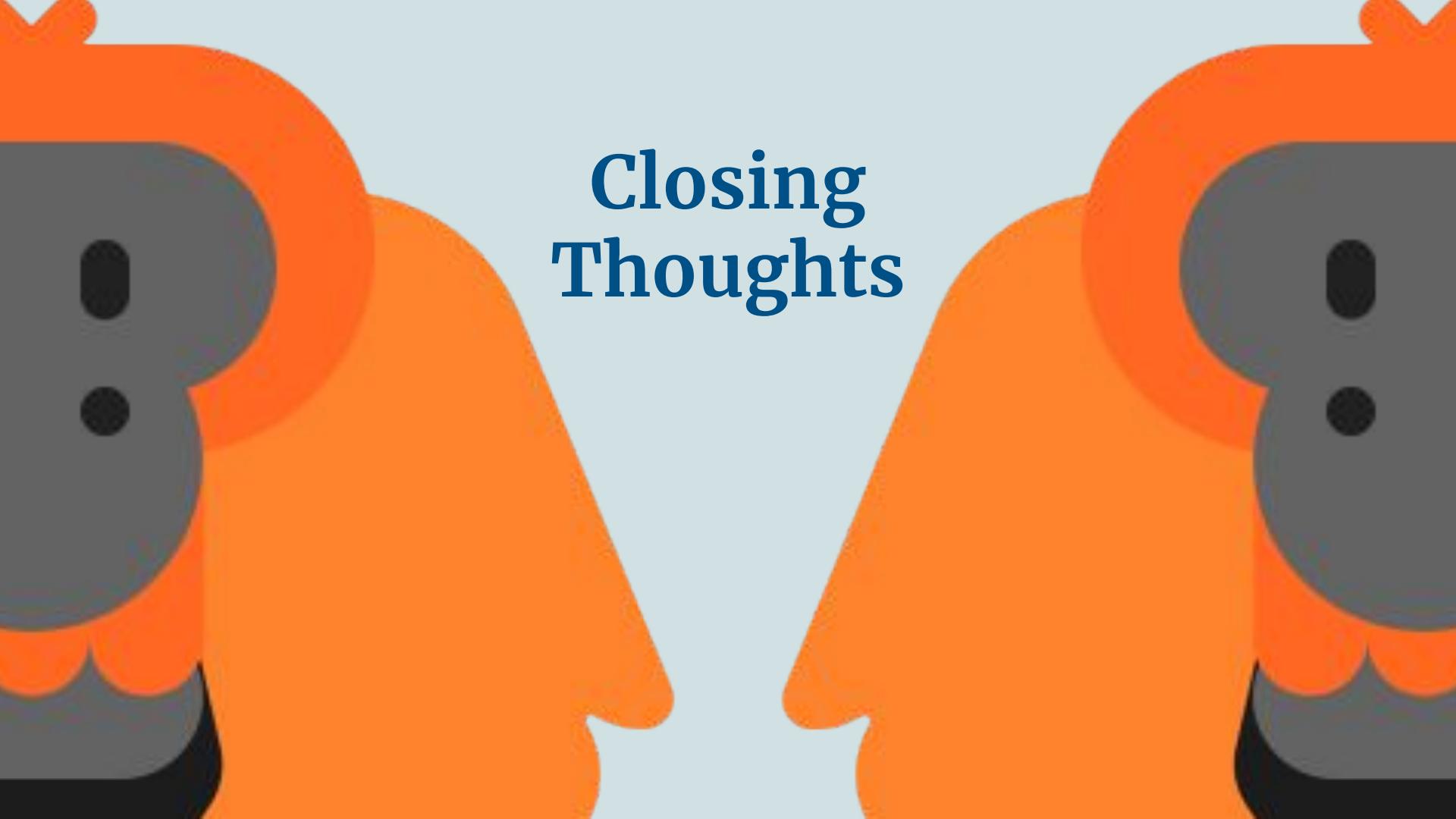
Unit tests for Systems  
which don't Support  
Storefront

- Test functionality of each component
- Test components operate the same as before storefront was introduced



Regression Test Suite

- Deployed after enhancement released
- Test if ScummVM and storefront are still performing as intended after launch



# Closing Thoughts