

Lifewerx

An Immersive Virtual  Collaborative Environment

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Report Documentation Page

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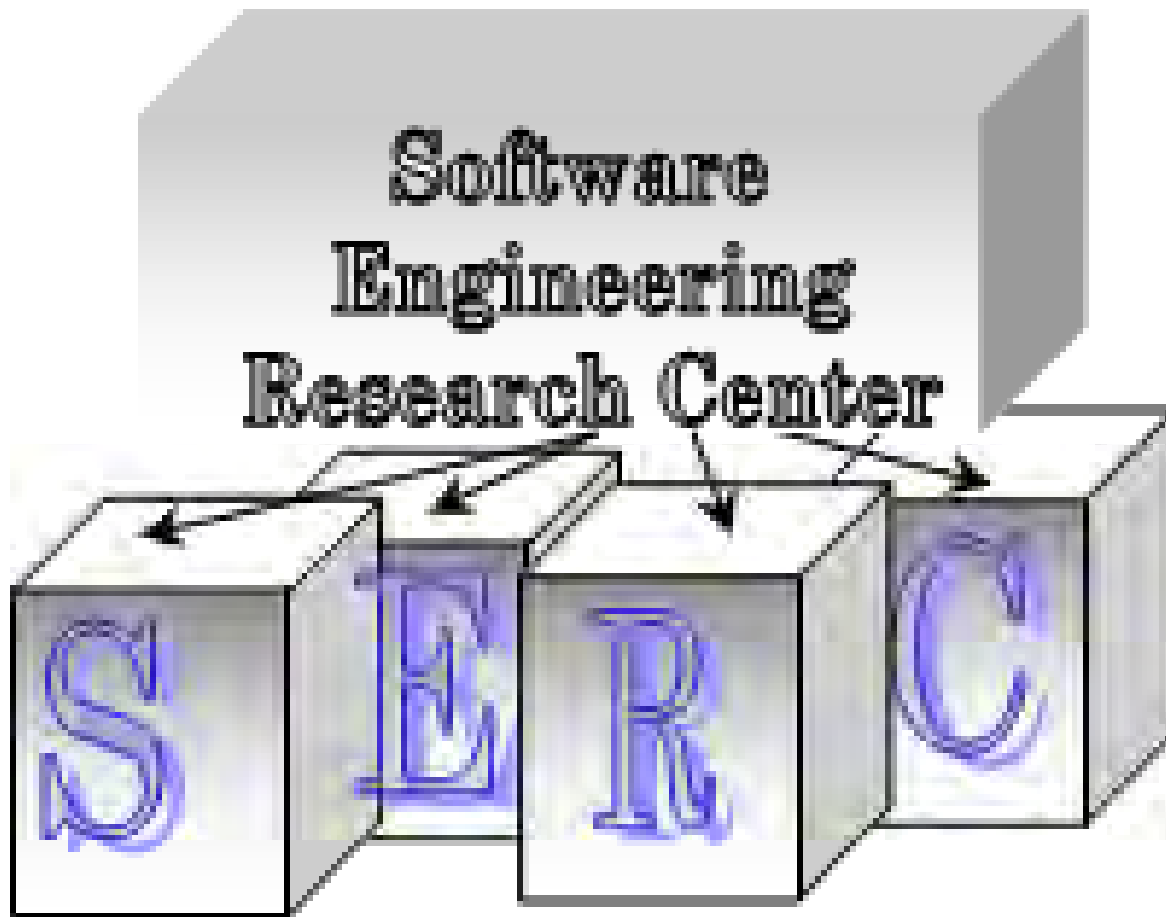
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LifeWerx Goal:

Develop a functional and secure 3-D virtual collaboration environment to enhance the everyday professional work experience

Project Themes:

- In-house
- Secure
- Full internal control



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History of LifeWerx:

- Based on Project Wonderland, a Sun Labs open source virtual world
- Began with work on version 0.4.

Why Wonderland:

- Lack of product-based virtual worlds
- Sending data to third parties not viable

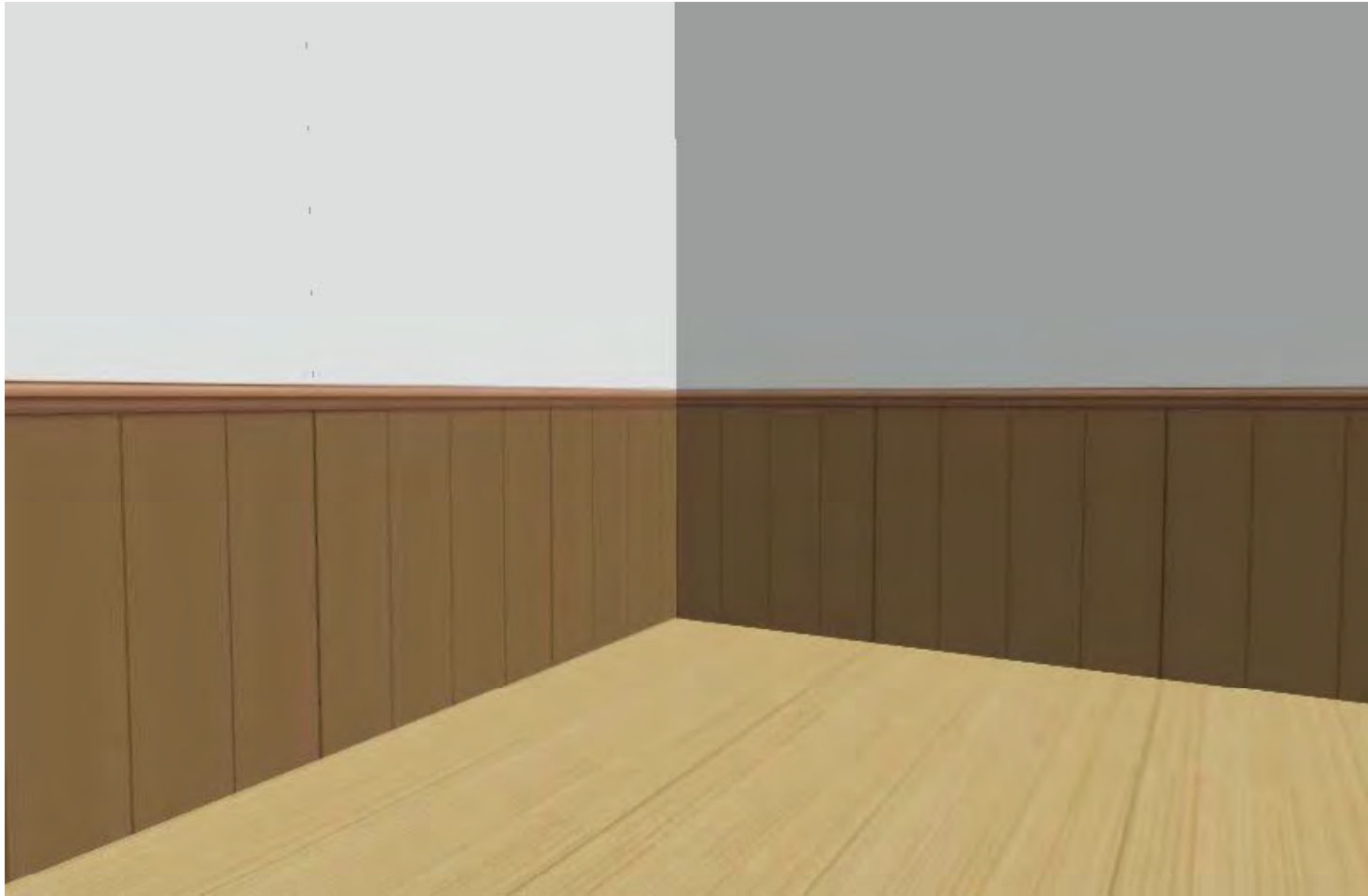
Early LifeWerx Developments:

- Wiimote feature
- Enhanced Avatar Configurator
- Access Control feature

Enhanced Avatar Configurator:



Access Control:



Some of the changes in 0.5:

- Java3d -> jMonkeyEngine
- MTGame multi-threading engine
- Automatic deployment control via JNLP / modular builds
- Web-based administrative interface

Some of the changes in 0.5:

- Module system
- Ease of administration

Comparison between versions:



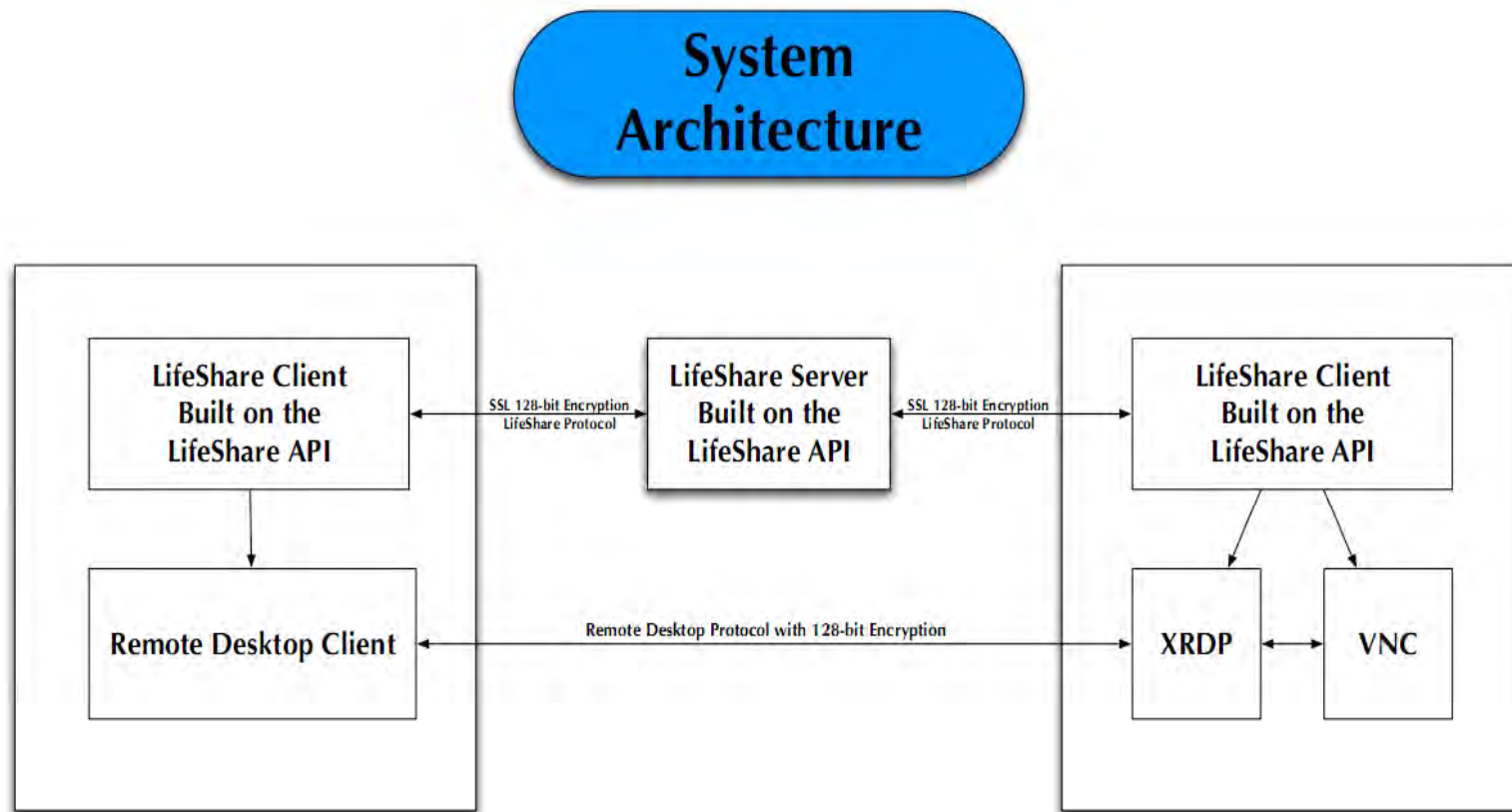
Features we didn't need to make in 0.5:

- Enhanced avatar customization
- Real-time security module

Desktop Sharing:

- What is desktop sharing?
- In 0.4 we built LifeShare, a standalone program to allow for desktop sharing
- Complex system involving VNC server, VNC->RDP bridge (via xrdp ported to Windows) and RDP clients

Architecture:



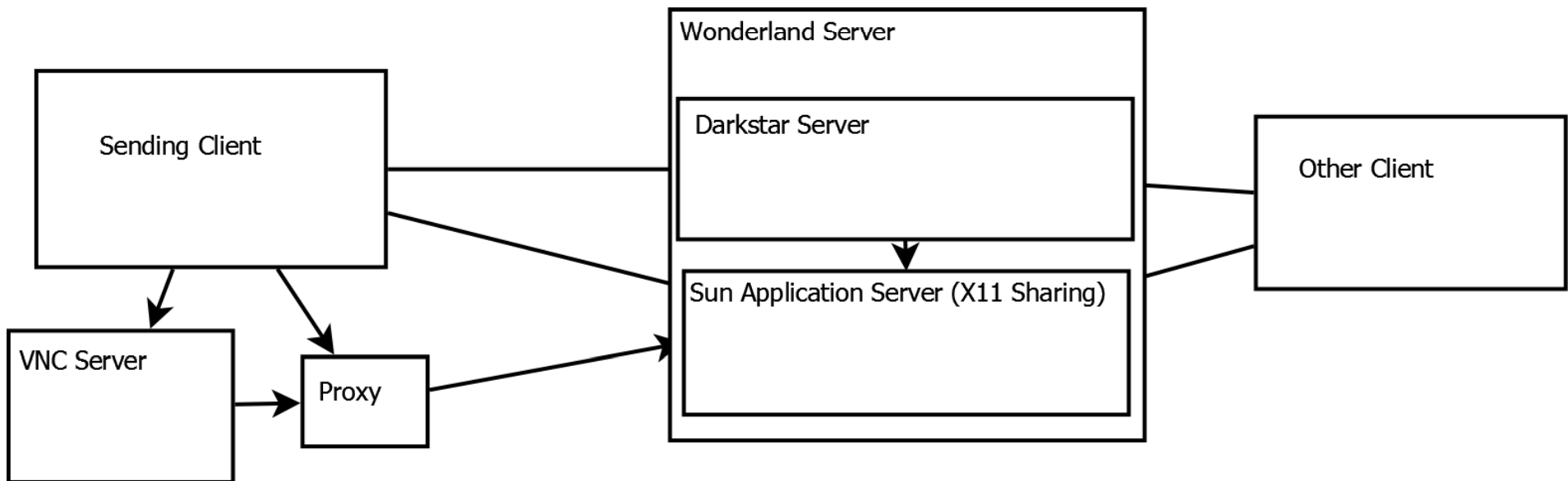
LifeShare Issues:

- Maintenance was difficult
- Integration challenges
- 0.5 offered a clean slate

The new LifeShare:

- Embedded VNC server
- Built-in proxies for security
- Wonderland's Sun Application Server
- Custom plug-in to handle communication

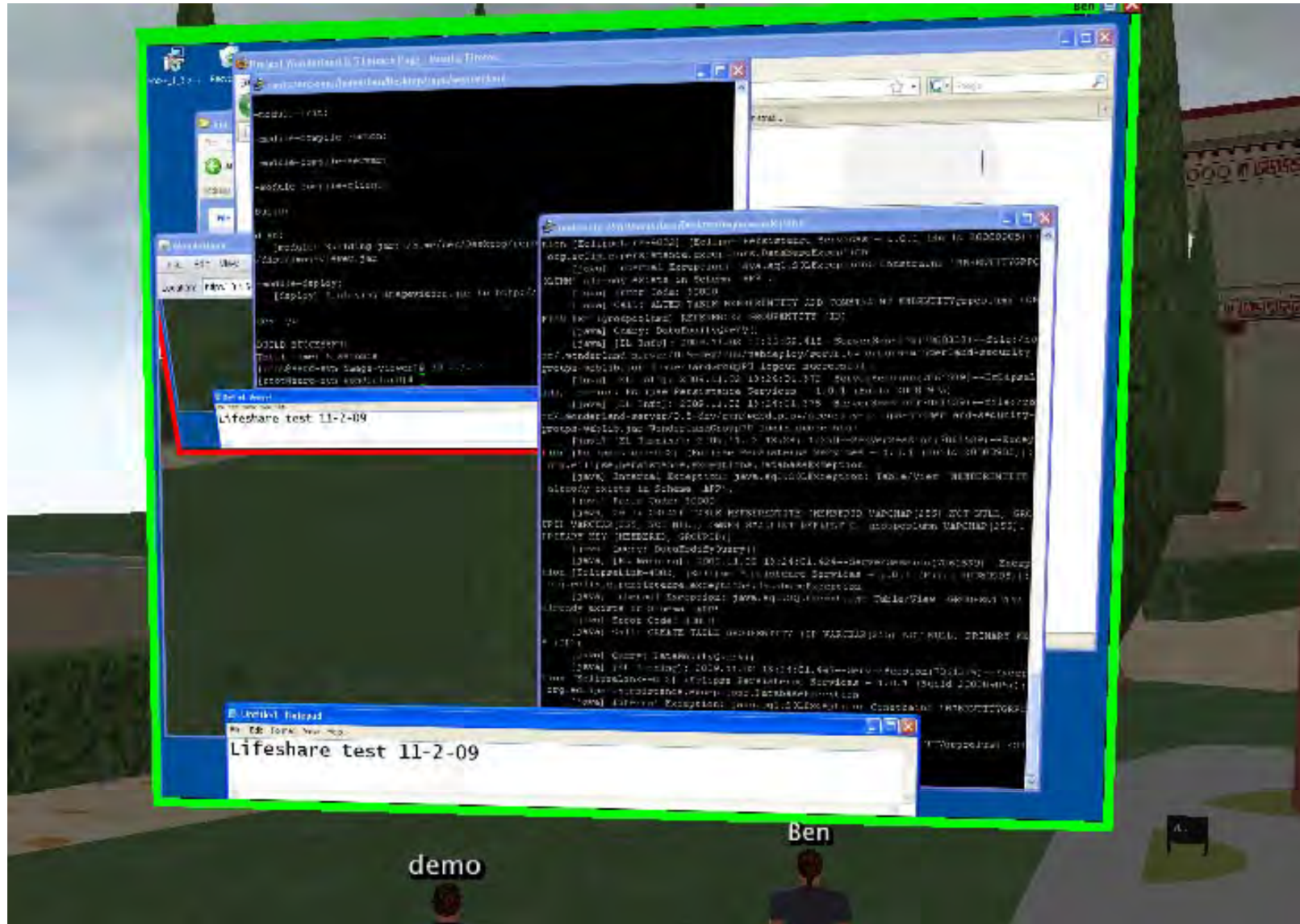
Architecture Diagram:



Lifewerx

An Immersive Virtual Collaborative Environment

LifeShare:

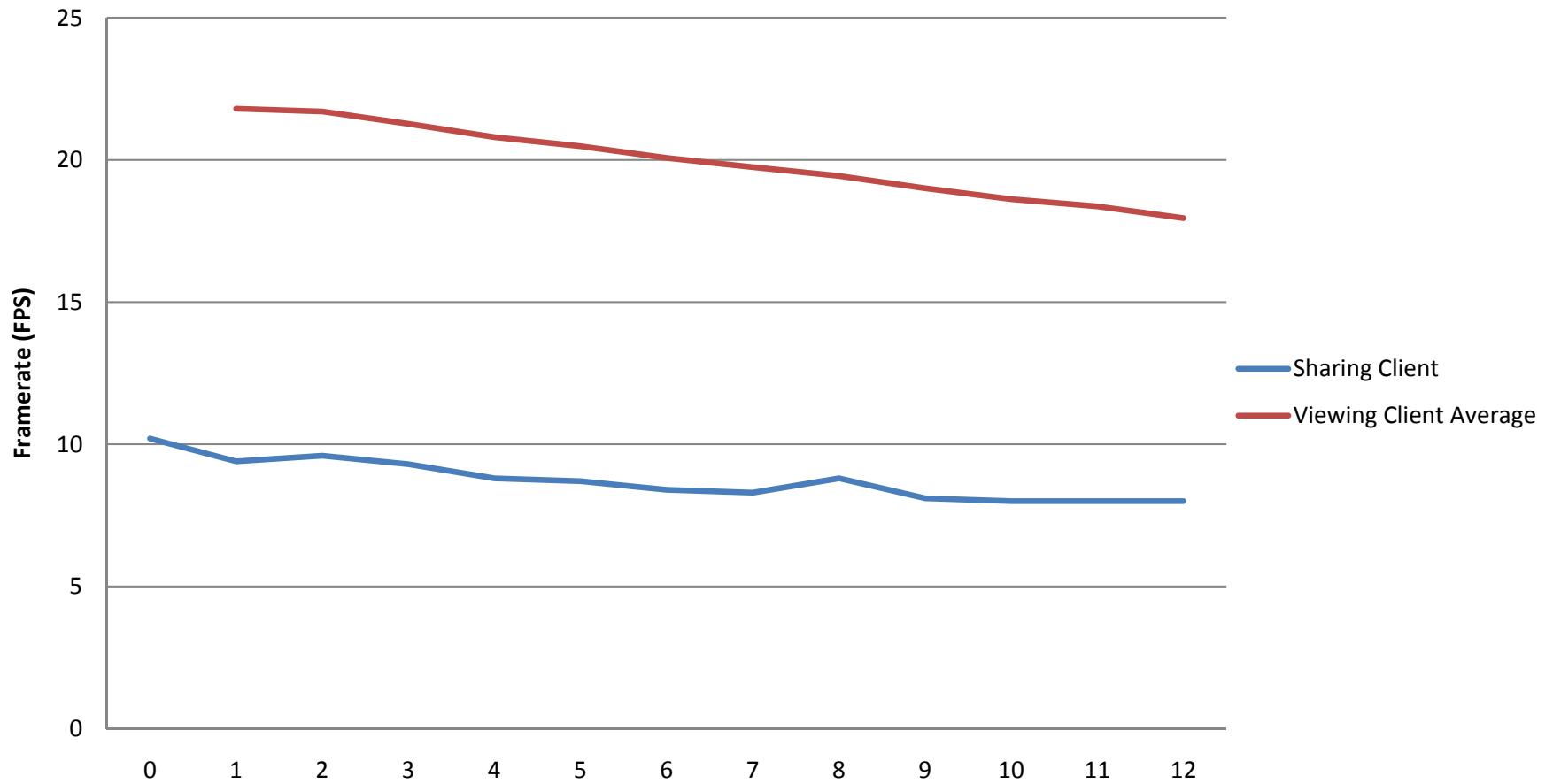


Recent Developments:

- Integrated VNC hooks
- Integrated SSH tunneling
- Stress testing

Stress testing:

Frame rate vs Number of Viewing Clients





Questions and Comments?