



# *Computer Lab of the Future*



Pilot Expansion



INFORMATION TECHNOLOGY  
TECHNOLOGY-ENHANCED LEARNING  
AND ONLINE STRATEGIES  
VIRGINIA TECH.



# Timeline

- Fall 2019 - working group established
- Spring 2020 - pandemic response, Apporto acquisition
- Fall 2020 - comparative analysis of products, first use
- April 2021 - whitepaper and comparison matrix
- October 2021 - LTI development sprint with CyberRange
- Spring 2022 - Apporto contract renewal, continued product exploration





# Why Apporto?

- LTI integration: 1-click launch from Canvas course
- Interface and features geared toward EDU
- High level of customer engagement
- Continued product improvement
- Direct line of support



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# *Apporto Features*

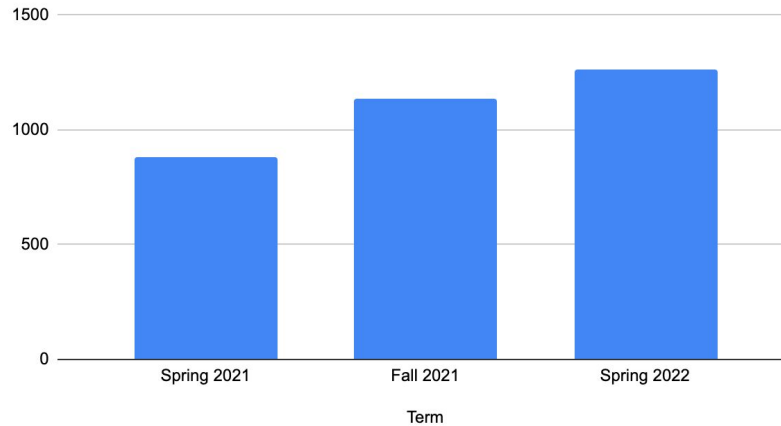
- Enrollment sync via LTI
- Messaging and screen sharing
- Virtual Classroom
- File upload/download
- USB over network
- Zero Trust virtual desktop





# Apporto Adoption

Students in Apporto enabled courses



College	Courses	Students
COS	28	1515
COE	23	902
CNRE	6	351
COB	2	339
CAUS	3	197
CLAHS	4	35
CALS	1	8
LIB	1	5
DOIT	1	3
<b>Total</b>	<b>69</b>	<b>3355</b>





# Apporto Usage

## Windows

- Microsoft Office 2019
- Matlab
- COMSOL
- Mathematica
- SPSS
- JMP
- Respondus
- R/RStudio
- Tableau
- Read&Write
- Equatio
- Minitab

## Windows vGPU

- Siemens NX
- PTC Creo
- CATIA
- DecisionCapture
- ArcGIS Desktop
- ArcGIS Pro
- Python
- PyMOL
- Schrodinger Suite
- Keyshot 10
- Google Earth Pro
- Keyshot 10





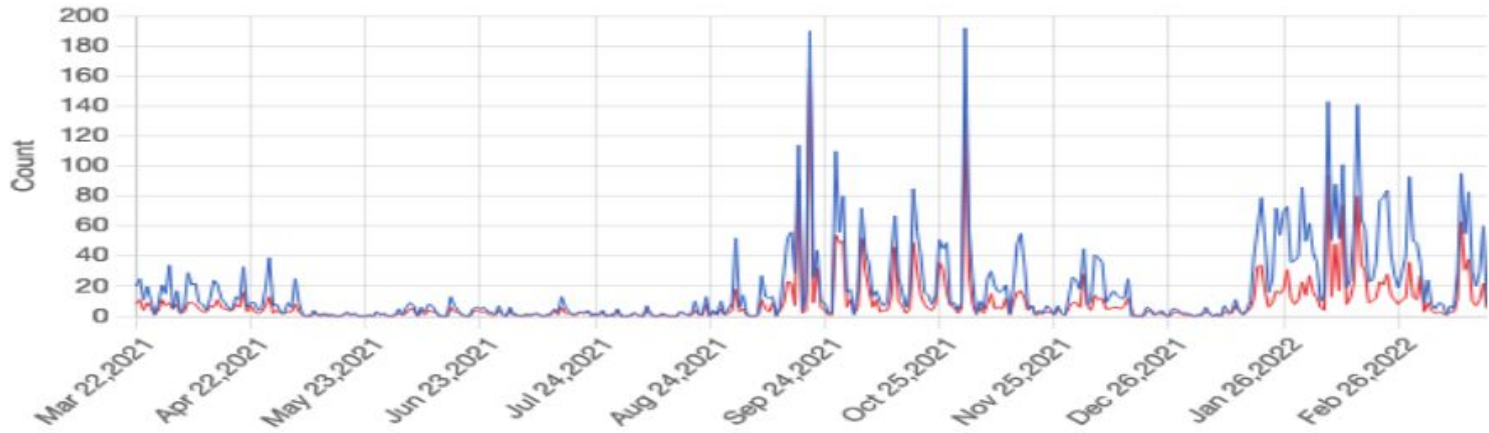
# Apporto Usage

How many users/sessions did you serve?

— Total Sessions  
(in browsers)

— Concurrent Users  
(on servers)

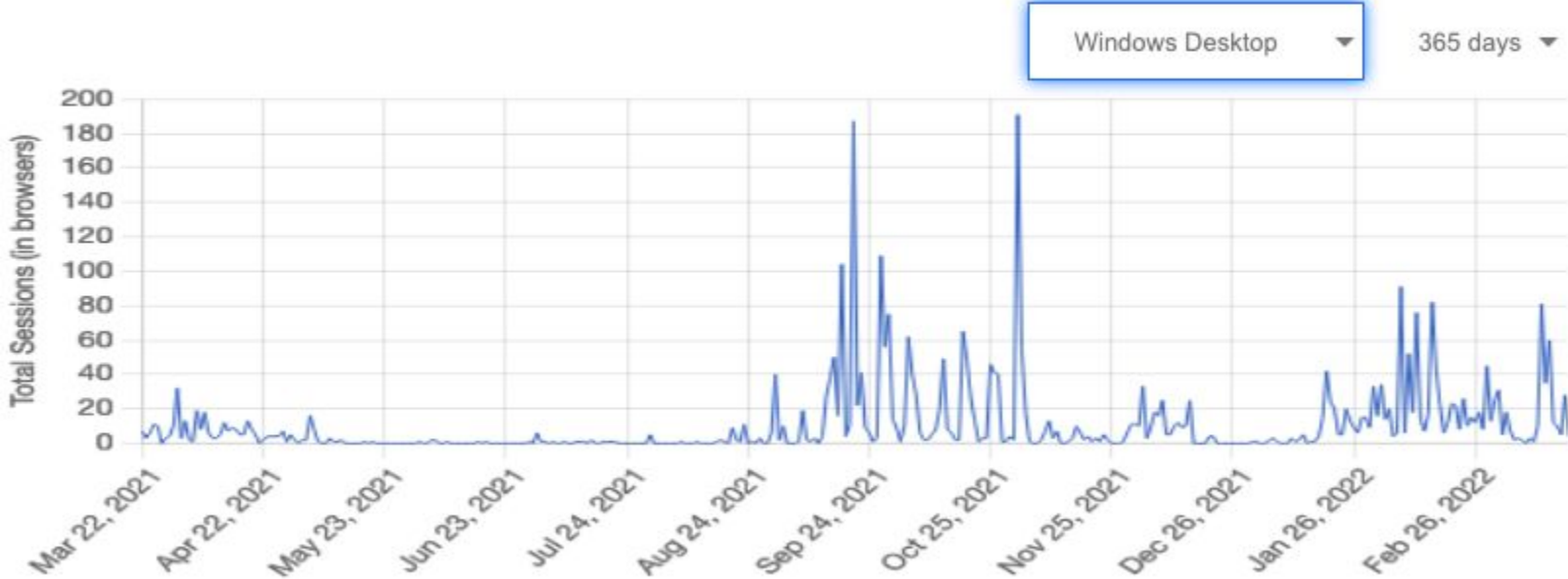
365 days ▾





# Apporto Usage

What are the desktops/apps usage patterns?







# *Requesting a Lab*

- IT Service Catalog entry
  - Cloud-Based Computer Labs - Integrate with Canvas
- Consultation with TLOS staff
  - Determine faculty use case
  - Identify appropriate solution, verify licensing
  - Perform course integration, confirm proper function





# *Our Work Continues*

- Provide high-level consultation and support for Apporto and CyberRange deployments
- Continued product evaluation, in coordination with stakeholders and partners
  - AWS AppStream 2.0
  - Azure Labs (LTI)
  - Azure Virtual Desktop

