BCNET CONNECT

HIGHER ED & RESEARCH TECH SUMMIT

Effective Software Delivery Strategies for Hybrid Learning Environments

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British Columbia Institute of Technology (BCIT)

IT at BCIT

- Student Enrollment
  - ~20,000 Full Time
  - ~30,000 Part Time
- 300 computer lab spaces across 5 campuses
  - Burnaby (Main), Downtown Vancouver, Richmond
  - Annacis Island, North Vancouver
- BCIT's IT Model
  - Centralised IT
  - Computer Mix: 80% Windows / 20% macOS
  - 450+ Academic software titles in catalog

Before AppsAnywhere

- Delivered software via lab-specific monolithic images
- Citrix XenApp/XenDesktop VDI for flexible/remote learning
- Annual summer software request window
  - Software versions “locked in” by mid-August
- Team of ~18 Image Builders for all campuses

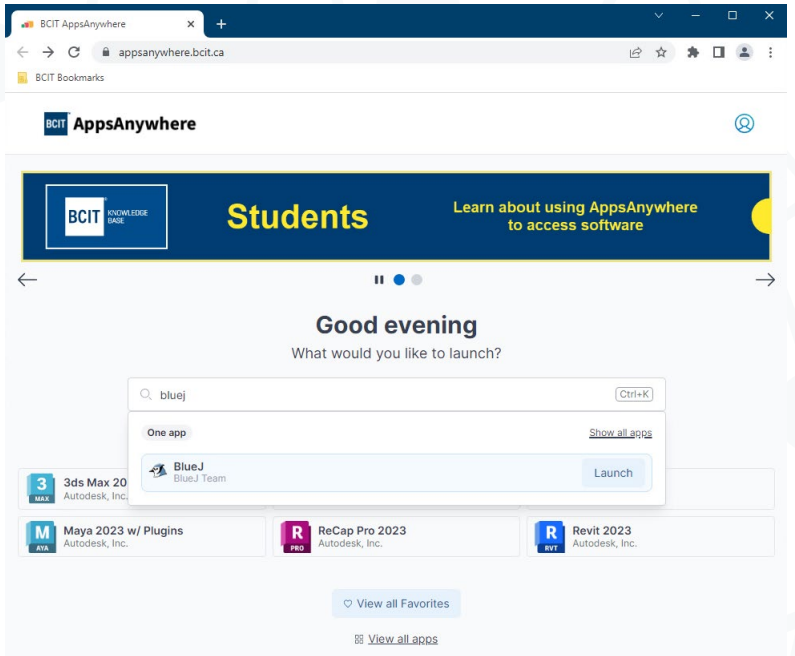
Why Change?

- Frequent space & scheduling constraints in physical computer labs
- Underutilization of equipment in other spaces
- Disk Space limitations restricted amount of software in labs
- Support growing number of mobile/BYOD learners
- Students only able to use licensed software in specific labs
- Typical term start resulted in 4-6 weeks of “chaos”
  - Challenges with Faculty holidays
  - Limited maintenance windows
  - Frequently updated software always out of date
  - Software packages require reconfiguration

- Pandemic greatly accelerated timelines

AppsAnywhere @ BCIT

- Our primary software delivery system
  - Delivers 400+ Apps and growing each term
- The “one stop shop” for apps on and off campus
  - Auto-launches on login for BCIT Devices
  - BYOD can launch from https://appsanywhere.bcit.ca
- Now able to accept software requests year-round
  - Existing software no longer generates a request ticket
- Static software does not need to be reinstalled each year

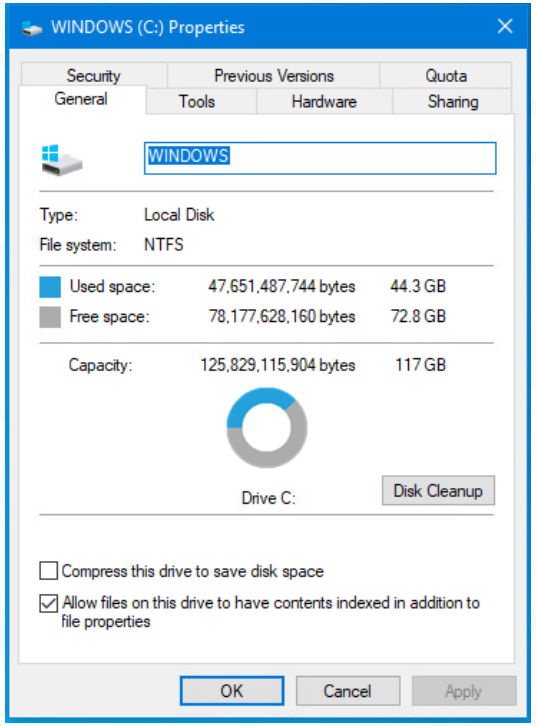


AppsAnywhere @ BCIT

- Updates can be deployed anytime
  - Can offer multiple versions to accommodate different course curriculum
- Enables timetabling to schedule classes in appropriately sized spaces
- Some schools continued to offer hybrid/BYOD options post-pandemic
- Students
  - Able to use most software in any open lab/campus
  - BYOD devices can have same experience/licensing as computer labs

AppsAnywhere @ BCIT

- Computer labs now run on a unified “thin” base image
  - Minimal imaging time
  - Disk space limitations have been eliminated
- Citrix XenDesktop for macOS clients
  - Provides Windows desktop with same “thin” base image
  - Apps are streamed from AppsAnywhere within Citrix
  - Can also be used with Parallels and Azure Labs
- Image builder team condensed to ~7 individuals
  - Includes macOS and Windows base image team
- Typical term start is now literally “crickets”
- Analytics data has identified unused or over-licensed applications



Best Practices / Tips for Success

- Offer “standardized” software packages campus wide
  - Used to offer 21 customized versions of AutoCAD
  - Condensed down to 2 (some plugins have limited licensing)
- Avoid offering multiple delivery streams (i.e. Physical, Citrix and AA)
  - Significantly increases packaging/imaging workload
  - Change resistant clients rarely move over
  - Support and troubleshooting becomes more complex
- Deploy a “thin” base image campus wide
  - Provides a consistent experience in any lab
  - Focus efforts on AppsAnywhere packaging

Best Practices / Tips for Success

- Pilot with “eager” departments/schools to help champion rollout
- Don’t restrict App Catalog unless necessary
- Tag Apps with key information to assist Help Desk with troubleshooting
- Leverage Analytics to aid with budgeting and prioritization
- Have a dedicated AppsAnywhere packaging/support team
  - Provide with dedicated hardware to run and store multiple VMs
- Build a library of “recipes” for each application you package
  - Join and share knowledge with the AppsAnywhere Hub/Community
  - https://customers.appsanywhere.com/hub

Any Questions?

- Still have questions after the session?
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Thank You!