



K2's Simplifying And Economizing Your Tech Stack

Learning Objectives



Identify tech tools
installed in business
environments

List examples of features
in tech stacks often
duplicated across
applications

Cite examples of
applications and services
that are less expensive
alternatives to traditional
technologies

Calculate the total cost of
ownership of specific
tech tools



WHAT DO WE MEAN BY “TECH STACK”

Defining “Tech Stack”



- In the simplest of terms, **your tech stack is the collection of all the technologies you use, including hardware, and software, along with services and subscriptions**
- It includes traditional applications, **but increasingly relies on Cloud-based solutions and mobile apps**
- Notably, although **many users in an organization will use many of the same technologies** – Microsoft Office, for example – **not every team member’s tech stack will be the same**
 - For example, accounting applications in use only by accounting department team members

Tech Stacks At A “Macro” Level



- Some refer to **“tech stack”** only in the context of building a **website, web app, or mobile app**
- While that is a valid use of the term “tech stack,” **our use of “tech stack” in this session will be at the “macro” level**
- That is, **we’ll consider a tech stack to be all the software and hardware you use to run your business**

Managing Your Tech Stack Matters!



- Can't we let our tech stack evolve naturally? Why do we need to manage and control it?
- ***If you don't manage your tech stack, it could manage you!***
- Consequences of an unmanaged tech stack could include ***increased expenses, lack of integration, ineffective information technology controls, compromised security, reduced productivity, and too many manual processes and procedures***
- Therefore, you and your team will benefit from adopting a **strategy of proactively managing your tech stack**



GETTING STARTED WITH YOUR TECH STACK

In Simple Terms, For End Users, It Could Look Like This



Software

- Microsoft, Google, Zoho
- Line-of-Business Apps

Connectivity

- Wired, Wi-Fi, Cellular

Hardware

- Desktop, Laptop, Tablet, Mobile

End User Operating System

- Windows or Mac (or both)

A Note On Operating Systems



- **Windows continues to dominate** the market for desktop operating systems in North America
- However, **MacOS continues to increase its presence**, slowly but steadily
- Note that these are not mutually-exclusive options...**you can install Windows alongside MacOS on a Mac**

A Note On Hardware



- **Most professionals use multiple devices** to perform their jobs
- Desktops, laptops, tablets, and mobile devices are all frequently in use by the same person; therefore, the **availability of data is very important** in these environments
- Also, the **multi-device environment increases data security issues and concerns**
- To simplify and economize your tech stack, **attempt to reduce the number of devices in use by getting rid of superfluous and unnecessary devices**

The March To The Cloud



- While operating systems and end-user hardware remain critical considerations, **their importance will likely diminish over the coming decade**
 - Why? **The incessant march to the Cloud continues**
- At some point in the coming decade, **the majority of all our apps and services likely will be Cloud-based**
- At that time, **many of the issues we need to manage today will be outsourced to our service providers**

What Apps Do You Currently Use?

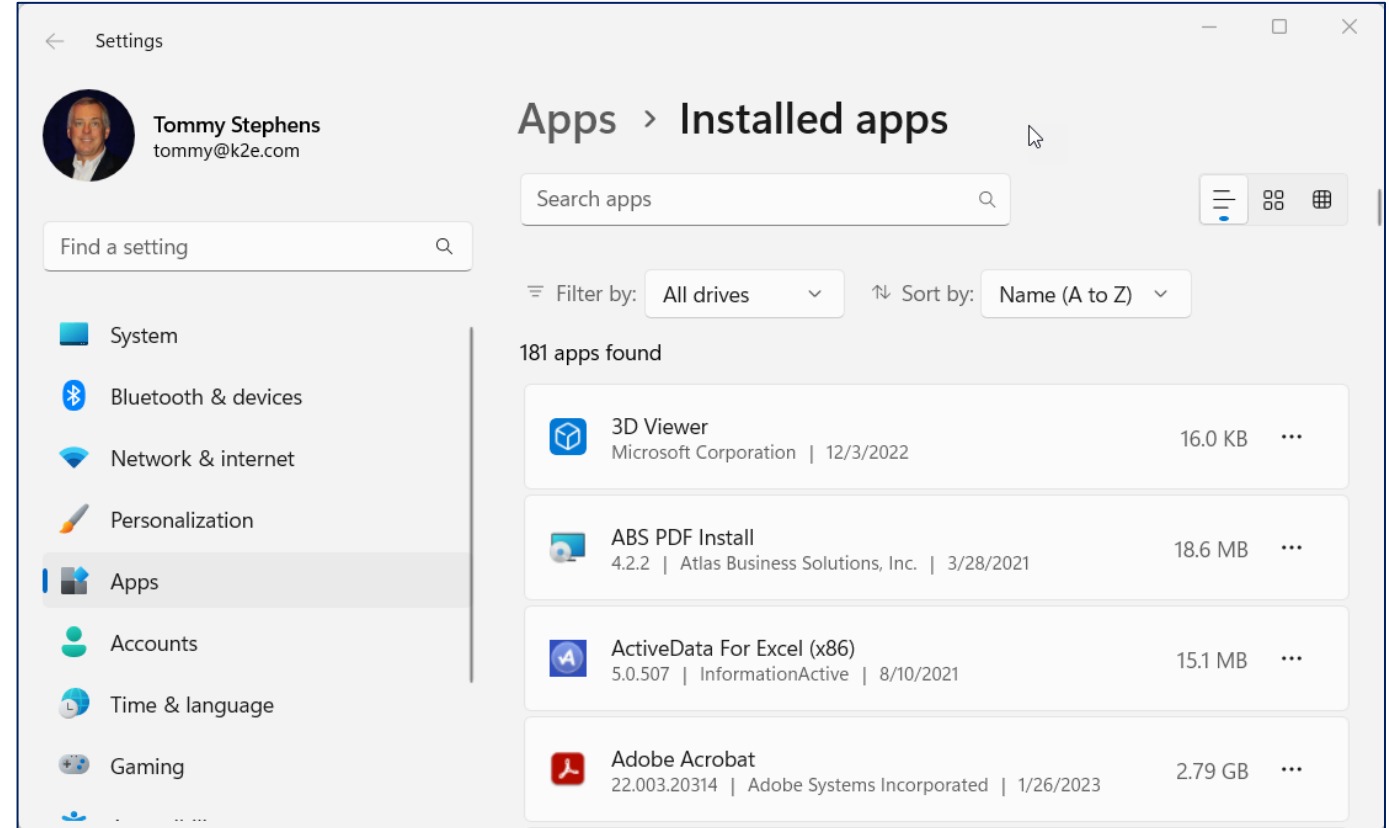


- A good place to start managing your tech stack is to **inventory all the apps presently installed on your computer**
 - *What's installed may be quite different from what you use*
- It is common to find duplicated apps, services, and subscriptions, **all of which can increase costs and risk, particularly when considering Cloud-based tools**
 - *Flexara estimates the average company wastes 35% of its Cloud budget on duplicated functionality*
 - *Browsers, email clients, PDF tools, desktop productivity, and maintenance tools are common examples*

How To Inventory Your Device



- One quick way to inventory a Windows device is to right-click **Start** and choose **Installed Apps**



Also, Consider A Tool Like Belarc



- **Belarc Advisor** is a great tool for identifying all installed apps on a device
- Note, the free tool is for personal use only; **in business environments, you must purchase a license**

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i i Adobe - Acrobat Update Service version 1.824.460.1032
i i Adobe - CCXProcess version 4.10.0.39 (64-bit)
iii i Adobe - Connect version 2022,5,109,64h (64-bit)
i i Adobe - Creative Cloud version 5.7.1.1
i i Adobe - Creative Cloud Desktop version 5.7.1.1 (64-bit)
i Adobe - Creative Cloud Desktop App version 5.7.1.1
i Adobe - UnifiedPluginInstallerAgent version 1.4.0.89 (64-bit)
i Adobe - Update Helper version 5.8.0.592
iii i Adobe - Update Service version 5.8.0.592
i Adobe Acrobat - version 22.3.0.0 (64-bit)
i Adobe Acrobat DC - version 21.10.15.6 (64-bit)
i i Adobe Systems - Acrobat Distiller for Windows version 22.3.20310.0
i i Adobe Systems - Acrobat version 22.3.20314.0
i Adobe Systems - Acrobat DC version 22.3.20314.0
i Adobe Systems - Acrobat Notification Client version 1.0.4.0
i i Adobe Systems - AcroTray - Adobe Acrobat Distiller helper application. version 22.3.20314.0
i i Adobe Systems - Collaboration Synchronizer 22.3 version 22.3.20314.0
i i Adobe Systems - Connect version 2022,5,109,64 (64-bit)
i i Adobe Systems - Flash Player Update Service version 11,3,300,268
i i Adobe Systems - GC Invoker Utility version 8.2.0.18 BuildVersion: 8.2; BuildDate: Thu Jan 19 2023 10:33:08
i i Adobe Systems - Genuine Software Integrity Service version 8.2.0.18 BuildVersion: 8.2; BuildDate: Thu Jan 19 2023 10:33:08
i i Adobe Systems - Genuine Software Monitor Service version 8.2.0.18 BuildVersion: 8.2; BuildDate: Thu Jan 19 2023 10:33:08
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i i Adobe Systems - Updater Startup Utility version 9.0.0.31 (BuildVersion: 1.0; BuildDate: BUILD DATETIME)
i i Airtame - Airtame version 4.3.3.1145
iii i App Dynamic ehf - AirServer Universal version 5.6.3.0 (64-bit)
i i Apple - Bonjour version 2.0.2.0
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CCleaner: A Maintenance Option



- **CCleaner** is another option for managing and maintaining your device(s)
- You can use CCleaner to **tune and update your PC** and also help **keep all your installed applications updated**
- CCleaner also helps to **keep drivers updated**



DESKTOP PRODUCTIVITY TOOLS

Desktop Productivity Tools



- **Desktop productivity tools are those applications that are common to most end users, including**
 - Spreadsheets
 - Word processors
 - Presentation tools
 - Email apps
- Microsoft 365 dominates this space, but **you do have other options**, both Cloud-complimented and locally-installed

What Is Microsoft 365?



Microsoft 365 is a collection of Microsoft products and services available to individuals and businesses. Some of the components of Microsoft 365 are cloud-based, and some are traditional desktop solutions. Microsoft 365 subscribers can choose from à la carte options and bundled packages to create a solution tailored to their specific needs. Additionally, subscription-based pricing helps Microsoft 365 users manage cash flow without requiring any significant up-front investments in software licenses.

What Is Microsoft 365?



- Microsoft 365 is a collection of products and services that combines familiar desktop apps such as **Excel, Word, and PowerPoint** with Cloud-based services such as **SharePoint Online, Teams, OneDrive, and numerous ancillary services**
- Microsoft 365 subscriptions are available for **individuals, businesses** of all sizes, **governmental, educational, and not-for-profits**
- Generally, **subscribers can license an entire suite** of apps and services, **or they can choose to license individual components on an *a la carte* basis**, providing for tremendous flexibility

Microsoft 365 And Your Tech Stack



- **Where does Microsoft 365 fit into your tech stack, if at all?**
- **Almost all information workers require at least some of the functionality offered** in various 365 subscriptions
- Because you can mix-and-match 365 subscriptions underneath your 365 “umbrella,” **you can ensure each team member has access to the tools they need, without overpaying**

An Example: Office 365 E3



- Microsoft 365 Apps for Enterprise (Access, Excel, Word, PowerPoint, OneNote, Outlook)
- Exchange Online, Teams, SharePoint Online, Yammer
- Stream, Sway
- Power Apps, Power Automate, Power Virtual Agents, Forms, Planner, To Do
- Device and App Management
- Identity and Access Management
- Threat Protection
- Information Protection
- Advanced Compliance
- Cost is \$23 per user, per month

A Potential 365 Licensing Issue



- Be careful when licensing Microsoft 365
 - The “Home” versions of the platform are not licensed for business use
 - Thus, if you use a Home version for business use, you are potentially in violation of the license agreement

Subscription vs. Perpetual Licenses



- The most visible difference between the two options - **but not necessarily the most important** - is how you pay for the license
 - A one-time payment for “forever” use, compared to
 - Monthly payments that establish your term of usage
- A less-noted – but perhaps more important difference for many – is the **addition of features, functions, and utility that software publishers add to the subscription models**
 - Generally, the **new utility provided to subscription users is not available right away in perpetual licensing models**
- *So, what’s the potential impact on team member productivity?*

Microsoft 365...You Have Choices!



- Both **Google Workspace** and **Zoho One** are very good and viable options to Microsoft 365
- These platforms provide Cloud-based **spreadsheets, word processing, presentation, and email management tools**, like their competitors in Microsoft Office
- Additionally, you can access **Cloud storage options, communication platforms, and a strong suite of line-of-business apps and services**

Google Workspace



Business Starter

- \$6/month
- Email
- 100 participant video meetings
- 30GB storage

Business Standard

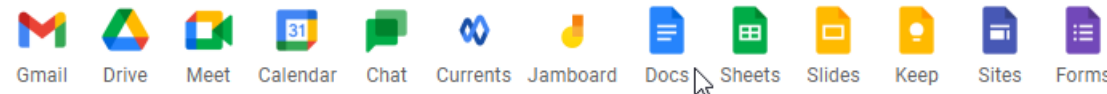
- \$12/month
- Email
- 150 participant video meetings + recordings
- 2TB storage

Business Plus

- \$18/month
- 250 participant video meetings + recordings and tracking
- 5 TB storage
- Enhanced security

Enterprise

- Custom pricing
- Advanced video meetings
- Unlimited storage
- Advanced security



Zoho One



- Zoho One takes a more **holistic view of the tech stack** an organization might need
- It includes services like those offered by Google Workspace and Microsoft 365, but adds many additional apps, including apps for **accounting, CRM, inventory, human resources, marketing emails, password management**, and others
- Further, there is tremendous integration between these apps and services, facilitating productivity and efficiency in businesses of all sizes
- Pricing for Zoho One is \$37 per user, per month

PDF Functionality: A Near Necessity



- **Portable Document Format (PDF) functionality is a near necessity** in today's business environment
- The “gold standard” for PDFs is **Adobe Acrobat**; however, **many other options are available**
- For example, **you can create PDFs using Microsoft Word, Excel, and PowerPoint, without reverting to a PDF tool**
- Your choice of PDF platform should depend on the features you (and your team) need

Examples Of Alternative PDF Tools



- **PDF Pro (\$49.97)**
- **Soda PDF Editor Pro (\$69.00)**
- **Nitro PDF Pro (\$179.99)**
- **Nuance Power PDF (\$169.99)**
- **PDF Pro 10 (\$49.97)**

Recommendation



- **Create a “standard” tech stack for each team member based on their job description**
- **Ensure the stack provides all needed functionality for the job the team member is engaged to perform**
- **Question situations where a team member indicates the stack is insufficient, particularly if other team members do not indicate the same**
 - Are the other team members engaging in manual, inefficient workarounds due to not having the necessary tools?



ESTIMATING YOUR TECH STACK COST

What Goes Into The TCO Calculation



- Initial purchase price of technology or subscription
- Implementation, installation, configuration costs
- Annual update, support, and maintenance cost, if any
- Cost of workarounds and manual efforts when technology platform does not provide necessary functionality
- See the TCO calculator at <https://k2e.fyi/softwaretco>

Review Question #3



Which of the following actions can help you plan for future technologies?

- a) Creating strategic and tactical plans
- b) Monitoring existing technologies for obsolescence
- c) Reviewing business processes for signs of technology incompatibilities
- d) All the above

Summary



- **Technology expenditures can get out of control easily, particularly when we don't have a plan**
- **Likewise, using manual workarounds to compensate for missing technology can be costly and prone to error**
- **Accordingly, we should act now to simplify and economize our tech stacks so that team members can work as efficiently, effectively, and securely as needed**



THANKS FOR PARTICIPATING TODAY!