

Network and Software Proposal for Alchemy Mobile Apps

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Date: 12/09/2024

Description:

This plan outlines how to set up the necessary hardware and software for Alchemy Mobile Apps within a \$15,000 budget.

We aim to create a secure and efficient workspace for developing Android apps, and animations, and handling daily business tasks while working within leasing restrictions.

Objective:

- Set up a dedicated server for accounting software and shared files with secure backups.
- Build an efficient wireless office network to meet collaboration and work requirements.
- Procure software for animation, app development, and website management
- Incorporate an office printer for administrative tasks.
- Ensure the infrastructure supports Android mobile app development.

Solution:

1. Workstations

HP Z2 G9 Tower Workstation – Customizable

<https://www.hp.com/us-en/shop/pdp/hp-z2-tower-g9-workstation-customizable-4n3u9av-mb>

We selected the HP Z2 G9 Tower Workstation for its strong performance, reliability, and future scalability. The Intel Core i5-12500 processor provides excellent speed for multitasking and demanding applications, while 16 GB of DDR5 RAM ensures smooth operation during creative tasks. The dual 512 GB SSDs with RAID 1 offer fast storage and data protection, and the NVIDIA® T400 graphics card can handle animation and app development software with ease.

Additionally, its robust configuration allows for future upgrades, such as adding more memory or changing the graphics card, making it a scalable solution to accommodate growing workloads and evolving business needs.

Overall, this workstation offers a great balance of performance, storage, connectivity, and scalability for a small business at a reasonable price.

Cost: About \$1,260 each, and about \$8,800 for 7.

Specifications:

PRIMARY SPECS

Operating system	Windows 11 Pro - HP recommends Windows 11 Pro for business
Base	HP Z2 Tower G9 Workstation - 350 W
Processor	Intel® Core™ i5-12500 Processor (3.0 GHz, up to 4.6 GHz w/Boost, 18 MB cache, 6 core, 65W) ECC + Intel® UHD Graphics 770
Memory	16 GB (1 x 16 GB) DDR5-4800 UDIMM Memory
Internal OS load storage options	Operating System Load to M.2
Internal M.2 storage	512 GB PCIe 4x4 2280 Value M.2 SSD
Graphics card	NVIDIA® T400 (4 GB GDDR6, 3 x Mini DisplayPort) Graphics

ADDITIONAL SPECS

ENERGY STAR	ENERGY STAR Qualified Configuration
Real-time data backup	RAID 1 Mirrored Array Configuration
2nd Internal M.2 storage	512 GB PCIe 4x4 2280 Value M.2 2nd SSD
Wireless LAN	Intel® Wi-Fi 6 AX211 + Bluetooth® 5.2
Flexible port options	No Load Flex Port
Optical drive	No included Optical Disc Drive
Keyboard	No Included Keyboard
Mouse	No Included Mouse
Power supply	C13 1.83m Sticker Conventional Desktop Power Cord US
Graphics connectors	No Adapters Needed
Technical AV	OS Localization
Warranty	Three-year (3/3/3) limited warranty
Packaging	Single Unit (Tower) Z2 Packaging
Country kit	Country Kit
ShipDate	
ShipDate	

2. Peripherals

HP V22v G5 FHD Monitor + Wireless Mouse and Keyboard Bundle

<https://www.hp.com/us-en/shop/pdp/hp-v22v-g5-fhd-monitor-wireless-mouse-and-keyboard-bundle-v22v-g5-mon-kb-ms-kit#bundlesTechSpecs>

We chose the HP V22v G5 FHD Monitor + Wireless Mouse and Keyboard Bundle for its practicality, cost-effectiveness, and compatibility with the office setup.

The 22-inch Full HD monitor provides clear, sharp visuals, ideal for everyday tasks and creative work, while the slim design helps maximize desk space. The wireless mouse and keyboard bundle ensures a clutter-free workspace, improving comfort and productivity.

Additionally, the combination offers good value, delivering the essential components for the workstations without exceeding the company's budget.

Cost: About \$700 for 7.

Specifications:

HP V22v G5 FHD Monitor

Display type	VA; LCD
Display features	On-screen controls; AMD FreeSync™; Low blue light mode; Anti-glare
Onscreen controls	Power control; Brightness; Exit; Menu control; Input control; Information; Color control; Image control; Management
Native resolution	FHD (1920 x 1080)[1,2]
Resolutions supported	640 x 480; 720 x 400; 800 x 600; 1024 x 768; 1280 x 720; 1280 x 800; 1280 x 1024; 1440 x 900; 1600 x 900; 1680 x 1050; 1920 x 1080
Contrast ratio	3000:1
Brightness	200 nits
Pixel pitch	0.25 x 0.24 mm
Response time	5ms GtG (with overdrive)
HDMI Port	1 HDMI 1.4
HDCP	Yes, HDMI
Sustainability Impact	Molded paper pulp cushion inside box is 100% sustainably sourced and recyclable; 85% ITE-derived closed loop plastic; Low Halogen
Energy efficiency	EPEAT® Gold
Webcam	No integrated camera
VESA Mounting	100 mm x 100 mm
Power supply	100 - 240 VAC 50/60 Hz
Dimensions (W X D X H)	19.85 x 2 x 11.93 in
Weight	6.17 lb
Warranty	One-year limited warranty.
What's in the box	Monitor; HDMI cable; Warranty card; Quick Setup Poster; AC power cord; Document kit

HP 230 Wireless Mouse and Keyboard Combo

Connection Type	2.4 GHz wireless connection
Wireless Range	Up to 32.81 ft in open area
Keyboard Type	Full size; 3-zone layout
Keys Structure	Plunger; Low profile key travel; 2.5 mm
Battery	2 x AAA (keyboard); 1 x AA (mouse)
Battery life	Up to 16 months (keyboard); Up to 12 months (mouse)
Buttons	3
Battery	2 x AAA (keyboard); 1 x AA (mouse)
Battery life	Up to 16 months (keyboard); Up to 12 months (mouse)
Indicator Light	Battery
Compatible operating systems	Windows 11; Windows 10
What's in the box	Keyboard; Mouse; Product Notice; Warranty Card; R.E.D. RTF Card
Compatibility	Compatible with all HP PCs with available USB-A port.
Warranty	Two-year limited warranty.
Dimensions (W X D X H)	17.23 x 5.76 x 1.09 in (keyboard); 2.49 x 4.53 x 1.43 in (mouse)
Weight	1.09 lb (keyboard); 0.14 lb (mouse)
Package Dimensions	17.95 x 8.66 x 1.73 in
Package Weight	1.85 lb

3. Printer

HP Smart Tank 7301 All-in-One Printer

<https://www.hp.com/us-en/shop/pdp/hp-smart-tank-7301e-all-in-one>

We chose the HP Smart Tank 7301 All-in-One Printer for its reliability, cost-efficiency, and functionality. This printer offers high-quality printing, scanning, and copying, making it perfect for a small office where space and budget are limited. Its Smart Tank system provides a more affordable and efficient solution for ink usage, reducing the

frequency of cartridge replacements. The wireless connectivity feature also enables easy printing from multiple devices, enhancing convenience for the company.

Cost: About \$300.

Specifications:

Functions	Print, Scan, Copy, ADF, Duplex, Wireless
Print Speed - Black (ISO, laser comparable)	Up to 15 ppm
Print Speed - Color (ISO, laser comparable)	Up to 9 ppm
Resolution (black)	Up to 1200 x 1200 rendered dpi
Resolution (color)	Up to 4800 x 1200 optimized dpi color when printing from a computer and 1200 input dpi
Monthly duty cycle	Up to 5,000 pages
Recommended monthly page volume	400 to 800 HP recommends that the number of pages per month of imaged output be within the stated range for optimum device performance, based on factors including supplies replacement intervals and device life over an extended warranty period.
Print Technology	HP Thermal Inkjet
Display	2-Line LCD with Smart guided Buttons 2.0 x 0.4 in (50.8 x 10.16 mm)
Processor speed	800 MHz
Replacement cartridges	HP 32XL 135-ml Black bottle (~6000 pages), HP 31 70-ml Cyan bottle (~8000 pages), HP 31 70-ml Magenta bottle (~8000 pages), HP 31 70-ml Yellow bottle (~8000 pages); For more information about fill and yield see www.hp.com/go/learnaboutsupplies
Compatible Ink types	Pigment-based (black); Dye-based (color)
Print languages	HP PCL 3 GUI
Automatic paper sensor	Yes
Paper trays, standard	1
Paper trays, maximum	1
Mobile Printing Capability	Apple AirPrint; Mopria certified; HP Print Service Plugin (Android printing); HP Smart app; Wi-Fi Direct Printing
Connectivity, standard	1 Wi-Fi Direct; 2 Hi-Speed USB 2.0 (device); 1 Ethernet
Memory, standard	256 MB
Minimum system requirements	macOS v10.14 Mojave, macOS v10.15 Catalina, macOS v11 Big Sur; 2 GB HD; Internet required Windows 10, 7; 32-bit or 64-bit, 2 GB available hard disk space, Internet connection, Internet Explorer.

Compatible operating systems	Windows 11; Windows 10; Windows 7; macOS 10.14 Mojave; macOS 10.15 Catalina; macOS 11 Big Sur; macOS 12 Monterey; macOS 13 Ventura; macOS 14 Sonoma
Paper handling input, standard	250-sheet input tray
Paper handling output, standard	100-sheet output tray
Duplex printing	Automatic
Envelope input capacity	Up to 30 envelopes
Borderless printing	Yes (up to 8.5 x 11 in, 210 x 297 mm)
Media sizes supported	Letter; Legal; Government Legal; Executive; Statement; 4 x 6 in; 5 x 7 in; 8 x 10 in; L; Photo 2L; Envelope(#10, Monarch, 5.5 bar); Card (4 x 6 in, 5 x 8 in)
Media sizes, custom	3.5 x 5 in to 8.5 x 14 in
Media types	Plain Paper, HP Photo Papers, HP Matte Brochure or Professional Paper, HP Matte Presentation Paper, HP Glossy Brochure or Professional Paper, Other Photo Inkjet Papers, Other Matte Inkjet Papers, Other Glossy Inkjet Papers, Light/Recycled
Recommended media weight	16 to 28 lb
Supported media weight	Plain paper: 16 to 28 lb; Envelopes: 20 to 24 lb; Cards: up to 110 lb; Photo paper: up to 66 lb
Scanner type	Flatbed, ADF
Scan file format	JPG; PDF; PNG; TIFF
Scan resolution, hardware	Up to 1200 x 1200 dpi
Scan resolution, optical	Up to 1200 dpi
Scan size (flatbed), maximum	8.5 x 11.69 in
Scan size (ADF), maximum	8.5 x 14 in
ADF Capacity	Standard. 35 sheets
Digital send file Formats	PDF; BMP; PNG; TIF; JPG
Copy resolution (black text)	Up to 600 dpi
Copy resolution (colour text and graphics)	Up to 600 x 600 dpi

Copy reduce / enlarge settings	25 to 400%
Copies, maximum	Up to 99 copies
Power	Input voltage: 100 to 240 VAC (+/- 10%), 50/60 Hz (+/- 3 Hz)
Power consumption	0.1 watts (off); 1.10 watts (sleep)
Operating temperature range	41 to 104°F
Operating humidity range	20 to 80% RH
Software Included	HP Printer Software, available online
Warranty	One year limited hardware warranty from the date of purchase; For more info please visit us at http://support.hp.com
Dimensions (W X D X H)	16.83 x 14.33 x 9.46 in
Dimensions Maximum (W X D X H)	17.86 x 17.35 x 9.83 in
Weight	16.98 lb
Package weight	23.54 lb
What's in the box	HP Smart Tank 7301 All-in-One Printer; HP 32XL Black Original Ink Bottle; HP 31 Cyan Original Ink Bottle; HP 31 Magenta Original Ink Bottle; HP 31 Yellow Original Ink Bottle; Ink caution flyer; Setup guide; Reference guide; Regulatory flyer; Power cord; For more information about fill and yield, see http://www.hp.com/go/learnaboutsupplies
Sustainability Impact	25% post-consumer recycled plastic; Recyclable through HP Planet Partners
Wireless capability	Yes, 2.4/5G dual band Wi-Fi, Wi-Fi Direct

4. Server

PowerEdge T150 Tower Server

https://www.dell.com/en-us/shop/cty/pdp/spd/poweredge-t150/pe_t150_tm_vi_vp_sb?tfid=91049735&dgc=opl&srsid=AfmBOooJke8OP8Rxp_gR43_V30_Lk_qScsQ74p02HHWE5Zd0wC3qkNi3GETc&configurationid=c5a1cd98-f86f-4d23-8973-cba657923253

We chose the PowerEdge T150 Tower Server for its cost-effectiveness, reliability, and scalability, making it a suitable option for the company.

The Intel Pentium G6505 processor offers enough power for the server's needs, running Windows Server 2022 Essentials smoothly for basic tasks like file sharing, email, and accounting. The 16 GB of ECC memory ensures stability and error correction, which is important for handling critical business data. The three 1TB hard drives in a RAID 5 configuration provide a balance of storage capacity and data protection, offering redundancy in case of drive failure. The Trusted Platform Module 2.0 enhances

security, while the chassis configuration supports future expansion with additional hard drives.

Overall, the PowerEdge T150 offers reliable performance, adequate storage, and security features at a reasonable price for the company, with room to grow as their needs increase.

Cost: About \$1,250

Specifications:

<div><div>Tech Specs</div><div><div><div>PowerEdge T150</div><div>PowerEdge T150 Server</div></div><div><div>Trusted Platform Module</div><div>Trusted Platform Module 2.0 V3</div></div><div><div>Chassis Configuration</div><div>3.5" Chassis with up to 4 Hard Drives and Software RAID</div></div><div><div>Processor</div><div>Intel® Pentium G6505 4.2GHz, 4M Cache, 2C/4T, No Turbo (58W), 2666 MT/s</div></div><div><div>Processor Thermal Configuration</div><div>Heatsink for 80W or less CPU</div></div><div><div>Memory Configuration Type</div><div>Performance Optimized</div></div><div><div>Memory DIMM Type and Speed</div><div>3200MT/s UDIMM</div></div><div><div>Memory Capacity</div><div>16GB UDIMM, 3200MT/s, ECC</div></div><div><div>RAID Configuration</div><div>C23 Software RAID 5 for S150 Embedded SATA</div></div></div></div>	<div><div>RAID/Internal Storage Controllers</div><div>S150 for Software RAID</div></div> <div><div>Hard Drives</div><div>(3) 1TB Hard Drive SATA 6Gbps 7.2K 512n 3.5in Cabled</div></div> <div><div>BIOS and Advanced System Configuration Settings</div><div>Performance BIOS Setting</div></div> <div><div>Advanced System Configurations</div><div>UEFI BIOS Boot Mode with GPT Partition</div></div> <div><div>Power Cords</div><div>NEMA 5-15P to C13 Wall Plug, 125 Volt, 15 AMP, 10 Feet (3m), Power Cord, North America</div></div> <div><div>Motherboard</div><div>PowerEdge T150 Motherboard with Broadcom 5720 Dual Port 1Gb On-Board LOM</div></div> <div><div>Additional Network Cards</div><div>On-Board Broadcom 5720 Dual Port 1Gb LOM</div></div> <div><div>Operating System</div><div>Windows Server 2022 Essentials,10CORE,FI,No Med, No CAL, Multi Language</div></div> <div><div>OS Media Kits</div><div>Windows Server 2022 Essentials,10CORE,DF Recovery Image, Multi Lang, (Downgrade not included)</div></div>
<div><div>Embedded Systems Management</div><div>iDRAC9, Basic 15G</div></div> <div><div>Password</div><div>iDRAC,Factory Generated Password, No OMQR</div></div> <div><div>IDRAC Service Module</div><div>iDRAC Service Module (ISM), NOT Installed</div></div> <div><div>Group Manager</div><div>iDRAC Group Manager, Disabled</div></div> <div><div>Internal Optical Drive</div><div>No Internal Optical Drive</div></div> <div><div>System Documentation</div><div>No Systems Documentation, No OpenManage DVD Kit</div></div> <div><div>SHIPPING</div><div>PowerEdge T150 Shipping</div></div> <div><div>Shipping Material</div><div>PowerEdge T150 Shipping Material</div></div> <div><div>Dell Services: Hardware Support</div><div>Basic Next Business Day 12 Months, 12 Month(s)</div></div> <div><div>Extended Service</div><div>NO WARRANTY UPGRADE SELECTED, 36 Month(s)</div></div> <div><div>Infrastructure Deployment Svcs</div><div>No Field Deployment Customer Install Required</div></div>	

5. UPS

Dell Connected Smart-UPS

<https://www.dell.com/en-us/shop/ipovw/ups>

We chose the Dell Connected Smart-UPS for its ability to provide reliable power protection and ensure business continuity in the event of power outages or disruptions.

This uninterruptible power supply (UPS) offers robust features like battery backup, surge protection, and automatic voltage regulation, which are critical for safeguarding the PowerEdge T150 Tower Server and network devices. The "smart" features allow for remote monitoring and management, giving the company easy control over power usage and battery status.

This UPS helps to prevent data loss, protect hardware from power surges, and ensure that the business can keep operating smoothly even during power interruptions

Cost: About \$650

Specifications:

<div>Tech Specs</div> <div><div>Device Type</div><div>UPS - external</div></div> <div><div>Color</div><div>Black</div></div> <div><div>Bundled with</div><div>APC SmartConnect</div></div> <div><div>Height (Rack Units)</div><div>0U</div></div> <div><div>UPS Technology</div><div>Line interactive</div></div> <div><div>Input Voltage</div><div>AC 120 V</div></div> <div><div>Input Voltage Range</div><div>AC 82 - 144 V</div></div> <div><div>Input Voltage Range (Adjustable)</div><div>AC 75 - 154 V</div></div>	<div><div>Frequency Provided</div><div>50/60 Hz</div></div> <div><div>Frequency Required</div><div>50/60 Hz</div></div> <div><div>Input Connectors</div><div>1 x power NEMA 5-15P</div></div> <div><div>Power Output Connectors Details</div><div>8 x power NEMA 5-15</div></div> <div><div>Output Voltage</div><div>AC 120 V ± 5% - 50/60 Hz</div></div> <div><div>Power Capacity</div><div>1 kW / 1440 VA</div></div> <div><div>Output Waveform</div><div>Sinewave</div></div> <div><div>Surge Energy Rating</div><div>680 Joules</div></div> <div><div>Circuit Protection</div><div>Circuit breaker</div></div> <div><div>Efficiency</div><div>98.4% at 75% Load, 97.2% at 25% Load, 98.2% at 50% Load, 98.4% at 100% Load</div></div> <div><div>Surge Suppression</div><div>Yes</div></div>
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Technology Lead acid	Expansion Slots 1 (total) / 1 (free) x SmartSlot
	Cables Included Power cable - integrated - 6 ft
	Equipment Protection Value 150000 US Dollars
	Features Audible alarm, LCD display, Automatic Voltage Regulation (AVR), LED indicators, cold-start function, automatic self-test, hot-swappable batteries, energy meter
	Compliant Standards CSA, ICES-003, UL 1449, UL 1778, FCC Part 15 B, CSA C22.2 No. 107.1, RoHS, REACH
Run Time (Up To) <ul style="list-style-type: none"> • 7 min at full load • 301 min at 50 Watts • 172 min at 100 Watts • 84 min at 200 Watts • 51 min at 300 Watts • 33 min at 400 Watts • 17 min at 600 Watts • 12 min at 700 Watts • 10 min at 800 Watts • 8 min at 900 Watts • 23 min at 500 Watts 	ENERGY STAR Yes
Recharge Time 3 hours	Service & Support <ul style="list-style-type: none"> • Limited warranty - replace or repair - 3 years • Limited warranty - batteries - 2 years
Features Maintenance free, sealed, leak-proof	Min Operating Temperature 32 °F
Quantity 1	Max Operating Temperature 104 °F
Remote Management Interface USB	Humidity Range Operating 0 - 95%
Interfaces 1 x management (USB) - 4 pin USB Type B	
Sound Emission 45 dBA	
Width 6.7 in	Battery Lead acid
Depth 17.3 in	Run Time (Up To) 7 min at full load
Height 8.6 in	Networking USB
Weight 54.23 lbs	Dimensions (WxDxH) 6.7 in x 17.3 in x 8.6 in
Shipping Width 13 in	Environmental Standards ENERGY STAR
Shipping Depth 23.2 in	Manufacturer Warranty 3-year warranty
Shipping Height 13 in	Rack Size 0U
Shipping Weight 59.92 lbs	Batteries Qty 1
Output Voltage AC 120 V ± 5%	Software Included Drivers & Utilities
Output connectors 8 x power NEMA 5-15	

6. Software

Animation and App Development:

- **Android Studio (Free):** For Android app development; the industry standard for mobile apps (<https://developer.android.com/studio>). We chose Android Studio because it is a free, powerful IDE specifically designed for Android app development. It provides all the tools needed for

coding, testing, and optimizing apps while being cost-effective for the startup. It's the official platform for Android development, ensuring compatibility and efficiency.

- Blender (Free): Powerful 3D animation and modeling software for creating animations (<https://www.blender.org>).

We chose Blender because it is a free, open-source software that offers powerful tools for creating 3D animations, modeling, and rendering. As a startup focused on animation, Blender provides professional-grade features without the cost, allowing the employees to create high-quality animations for apps and other projects. Its flexibility and wide community support make it an ideal choice for the company's needs.

Accounting Software:

Microsoft Office Suite has a collection of productivity tools including Word (documents), Excel (spreadsheets/accounting), and PowerPoint (presentations).

It is professional, easy to use, and works seamlessly across devices, ensuring compatibility and flexibility.

The lifetime license for \$40 is a cost-effective solution for the company's single-user accounting needs, offering long-term value without ongoing subscription costs.

https://www.groupon.com/deals/world-wide-electronic-software-delivery-llc-mycodes24?deal_option=3576164b-bb3d-441e-9950-ed9c97b9f93e&utm_source=Google&utm_medium=cpc&utm_campaign=US_DT_SE_A_GGL_TIM_TTT_PADS_CH1_CHP_NBR_g*world-wide-electronic-software-delivery-llc-mycodes24_productpartitionid*_campaignid*21781750261_adgroupid*_prodtarget*2369565686097_productid*3576164b-bb3d-441e-9950-ed9c97b9f93e_target*_d*Local-Product-Ads_keyword*_adtype*pla_with_promotion_merchantid*10018412_c*_k*_m*_adposition*&adsafe=true&gad_source=1&gclid=Cj0KCQiA3sq6BhD2ARIsAJ8MRwUR6QbirlG9dm8Q0EHLjAtoR8_Kgkgv4dbAauLxg4Di0Crybu_NmpgaAuIvEALw_wcB&gclid=aw.ds

Collaboration and Office Tools:

Microsoft 365 Business Standard (\$12.50/user/month): Includes Word, Excel, PowerPoint, Outlook, Teams, and 1TB OneDrive storage.

<https://www.microsoft.com/en-us/microsoft-365/business/microsoft-365-business-standard?activetab=pivot:overviewtab>

We chose Microsoft 365 Business Standard because it provides a comprehensive suite of essential productivity tools at an affordable price of \$12.50 per user per month.

These tools are critical for everyday business operations, offering robust features for document creation, communication, collaboration, and data management. Additionally,

the 1TB OneDrive storage per user ensures secure file storage and easy access from anywhere.

This package offers a cost-effective solution to support the team's productivity and collaboration needs as the company grows.

Website Hosting and Development:

- Bluehost Shared Hosting (Online Store plan: \$75/year): Affordable and reliable hosting for a business website (<https://www.bluehost.com/hosting/shared>). Bluehost is known for its strong performance, security, and customer support, making it a trusted option for small businesses. The Online Store plan provides the essential features needed to build and manage a professional website, including e-commerce functionality, making it a cost-effective choice as your business grows. It also includes tools to easily set up and manage your website without needing advanced technical knowledge.
- Visual Studio Code (Free): A versatile integrated development environment for coding and debugging a website's backend and frontend (<https://code.visualstudio.com>).

We chose Visual Studio Code because it is a free, lightweight, and highly versatile integrated development environment (IDE) that supports both frontend and backend development.

With its extensive extensions and features like debugging, syntax highlighting, and version control integration, it helps streamline the coding process for your website.

Its flexibility and ease of use make it an ideal choice for building, testing, and maintaining the company's website efficiently.

7. Security

Security Software:

Microsoft Defender for Business is available at \$3 per user/month as part of the Microsoft 365 Business Premium plan.

<https://www.microsoft.com/en-us/security/business/endpoint-security/microsoft-defender-business>.

We chose Microsoft Defender for Business because it provides advanced threat protection, device management, and security features tailored for small to medium-sized businesses. At \$3 per user/month as part of the Microsoft 365 Business Premium plan, it offers affordable yet comprehensive security for the company.

It is easy to use, integrates well with Microsoft tools, and offers automatic updates, ensuring ongoing protection against evolving threats without requiring manual intervention. This makes it a reliable, cost-effective solution to safeguard the company's data and devices.

Multi-Factor Authentication (MFA):

Adds an extra layer of security by requiring a second verification step, such as a mobile code or biometric scan.

Best for protecting sensitive data, email accounts, and logins to your accounting and development software.

Free for basic versions (ex: through Microsoft 365 <https://learn.microsoft.com/en-us/microsoft-365/admin/security-and-compliance/set-up-multi-factor-authentication?view=o365-worldwide>).

Server Rack:

Protects physical servers and network equipment from unauthorized access or damage.

Approximately \$120 through Amazon.

https://www.amazon.com/VEVOR-Enclosure-Ground-Mounted-Capacity-Equipment/dp/B0C8T7WHX2?source=ps-sl-shoppingads-lpcontext&ref_=fplfs&smid=ATVPDKIKX0DER&th=1.

8. Internet Plan.

Verizon 1Gig Fios Business Internet Plan.

<https://www.verizon.com/business/products/internet/fios/>.

We chose the Verizon 1Gig Fios Business Internet Plan because it offers ultra-fast, fiber-optic internet with high bandwidth, ensuring speedy performance for your business operations.

At about \$100 per month, it provides excellent value for fast and reliable internet with 99.99% network reliability, minimizing downtime. The plan also includes a full-service setup, which makes it easy to implement without additional effort or complications.

This plan is ideal for supporting a small business with high data usage and ensuring smooth operations across the network.

Cost: About \$100/month.

Specifications:

- Ultra-fast, fiber-optic internet with 99.99% network reliability and high bandwidth for speedy performance
- Full-service, zero-effort, and fast setup.

9. SOHO Router

Wireless Verizon Fios Router

<https://www.verizon.com/home/accessories/verizon-router/>

We chose the Verizon Fios Router because it not only combines both modem and router functionalities but also comes from the same company providing the internet service, ensuring optimal compatibility and reliability.

At \$400, this router provides everything the company needs for Wi-Fi and internet access, supporting Verizon's fastest internet plans with Gigabit+ speeds. It utilizes the latest Wi-Fi 6E technology with tri-band support, including the new 6GHz band, ensuring faster speeds and reliable coverage. The router's features like automatic band steering, beamforming, and self-organizing network functionality improve signal quality and network efficiency. Additionally, it offers enhanced security with WPA3 and Home Network Protection (HNP) powered by McAfee, which protects all connected devices with real-time alerts and parental controls.

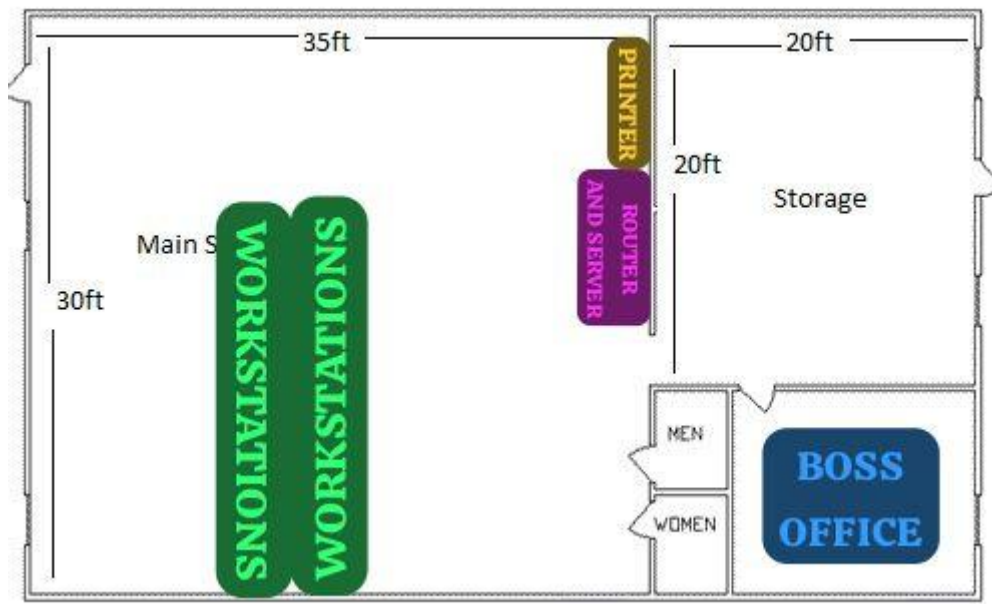
This router ensures your business has a secure, reliable, fast, and future-proof internet setup.

Cost: About \$400.

Specifications:

- “The Verizon Router allows you to take full advantage of Verizon's fastest Internet plans supporting Gigabit+ speeds with next generation Wi-Fi 6E technology, Tri-band Wi-Fi including new 6GHz Wi-Fi band, and offering 2.5 and 10 gigabits wired ethernet ports for even faster speeds in the future. It supports a single Wi-Fi name & password with SON (self-organizing network) functionality, automatic band steering, beamforming for improved signal quality between devices, and Guest Wi-Fi network support. For your protection, it is also equipped with a WPA3 wireless security protocol.”
- “The Verizon Router provides security for your home network with the Home Network Protection (HNP). HNP is included on your router with features provided by McAfee that will automatically protect all connected devices in your home network, once activated. Some features include Access Control / Parental Control / Block Internet Access / Real-Time Alerts.”
- “The Verizon Router includes Tri-Band Wi-Fi 6E which includes 3 (4x4) antennas that deliver wide and reliable coverage throughout the house (2.4GHz, 5GHz, 6GHz).”
- “Manage your home network and provide Wi-Fi access to your guests at your fingertips with My Verizon App.”

10. Office Plan



The workstations will be situated in the middle of the room with two large tables, providing a spacious and controlled environment for the employees, while also allowing for ease of communication and collaboration.

The router and the server will be situated approximately in the middle of the building, optimizing Wi-Fi distribution, and ensuring that the connection is reliable throughout the office.

Both the router and the server will be protected by a server rack, which adds an extra layer of security, helping to protect the server and sensitive data.

The installation of the internet will be provided by Verizon, ensuring that the cables are properly routed according to the building's leasing rules, making the setup smooth and compliant with any restrictions

The printer will be situated next to the router and the server in a separate table, which ensures easy access for all employees.

The boss will have its own office, offering a designated space for leadership.

The storage room is flexible for future use, such as a break room or other purposes depending on the company's needs

This layout ensures an organized, efficient, and secure workspace.

11. Additional Options

If the Wi-Fi connection is not being well distributed throughout the building, due to its brick walls, we will communicate with Verizon and they will probably install a Verizon Wi-Fi Extender (<https://www.verizon.com/home/accessories/verizon-wi-fi-extender/>).

The cost of this Wi-Fi extender is about \$250 but we will include it for free if there is a real need to install it.

If there is a need to connect devices through a cable ethernet (for example: the router and the server) we provide an option:

A 25ft Cat6 Ethernet Cable for about \$10 each in Amazon
(https://www.amazon.com/Cable-Matters-Snagless-Ethernet-Black/dp/B007NZGPAY/ref=sr_1_4?c=ts&dib=eyJ2IjoiMSJ9.SU1-TVaOF_p0cTo7Kb3YsMSTRWDyjDkG7hAw05Uq1d-DuEOBcF8tXvnmEjCSLCDPMZzS_hsHKQF_7WGU_8cdODYzQFxxl6OnY_-EYoAsfwMmuNtLu04GoBVUdHNCaco4fmtljdnbiMq2-Vm-Ee95m6S9t7JABjWZt8ZMN6cCNy55_R41YNw1AD0i4CyqXfb5-yMM50QxJWiR6_U1OK6DKAHCPoLoG1mQ9VkexOSk8zFxUoBa8y1EvnTIQKC_HjA-3MkKGnxQhE9DzQBfUOGk3TnNeChK0Mor3-bXeT46FZc.La-yU28ucdm8iRTlglfn21V2OPVy-Yk0T4KIgq4yD7Q&dib_tag=se&keywords=Cat%2B6%2BEthernet%2BCables&qid=1733728140&s=pc&sr=1-4&ts_id=9938478011&th=1).

12. Price

Item	Cost
7 Workstations	\$8,800
7 Monitor + Wireless Keyboard and Mouse	\$700
All-in-One Printer	\$280
Tower Server with UPS	\$1,900
Accounting Software	\$40
Website Hosting	\$75/year
Collaboration and Office Tools	\$12.50/user/month
Security Software	\$3/user/month
Server Rack	\$120
Internet Plan	\$100/month
Fios Verizon Router	\$400
Labor Cost	\$1500

Total Cost Estimated (Considering 7 employees): \$14,025

After the first payment, there will be monthly payments for software and internet services for about: \$210.

Every year there will be a \$75 payment for website hosting.

Our labor cost is a fixed rate. We estimate a week of work and in this price, we included the research for this proposal, configurations for everything (workstations, server, printer, server rack...), and a first month of support.

Conclusion:

This plan ensures that Alchemy Mobile Apps has the IT infrastructure needed for efficient operations and future growth while staying within budget. All solutions focus on scalability, security, and ease of use.