DIGITAL VISION

HARDWARE

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HARDWARE 2024

Desktop Computers
- Average life cycle of 3 to 5 years.
- Some customer computers still running Windows 7.

Reason for Keeping Old Computers
- "Cheaper" then upgrading.
- Replace if it dies.
- "Good enough"

Issues
- CPUs unable to keep up with current VISION software resulting in slow user experience.
- Not enough memory to load VISION efficiently resulting in the need to use storage as memory.
- Slow storage technology relying on hard disks or early generation SSD.
- Slow networking because of older network chips and firmware.

HARDWARE 2024

DIGITAL VISION

Desktop Computers

Two Configurations
- Standard Desktop – Data Entry, Customer Support, Machine Interfaces, General Lab PC
- Performance Desktop - Combobulator

Standard	Performance
6.97W x 6.89D x 1.34H in	6.97W x 6.89D x 1.34H in
Weight: 3 lb	Weight: 3 lb
CPU: i5 13th Generation	CPU: i7 13th Generation
RAM: 8GB	RAM: 16GB
SSD: 256GB	SSD: 256GB
OS: Windows 11 Pro	OS: Windows 11 Pro

HARDWARE 2024

Servers
- Average life cycle of 3 to 5 years.
- Some customer servers still running Server 2008 32-bit.
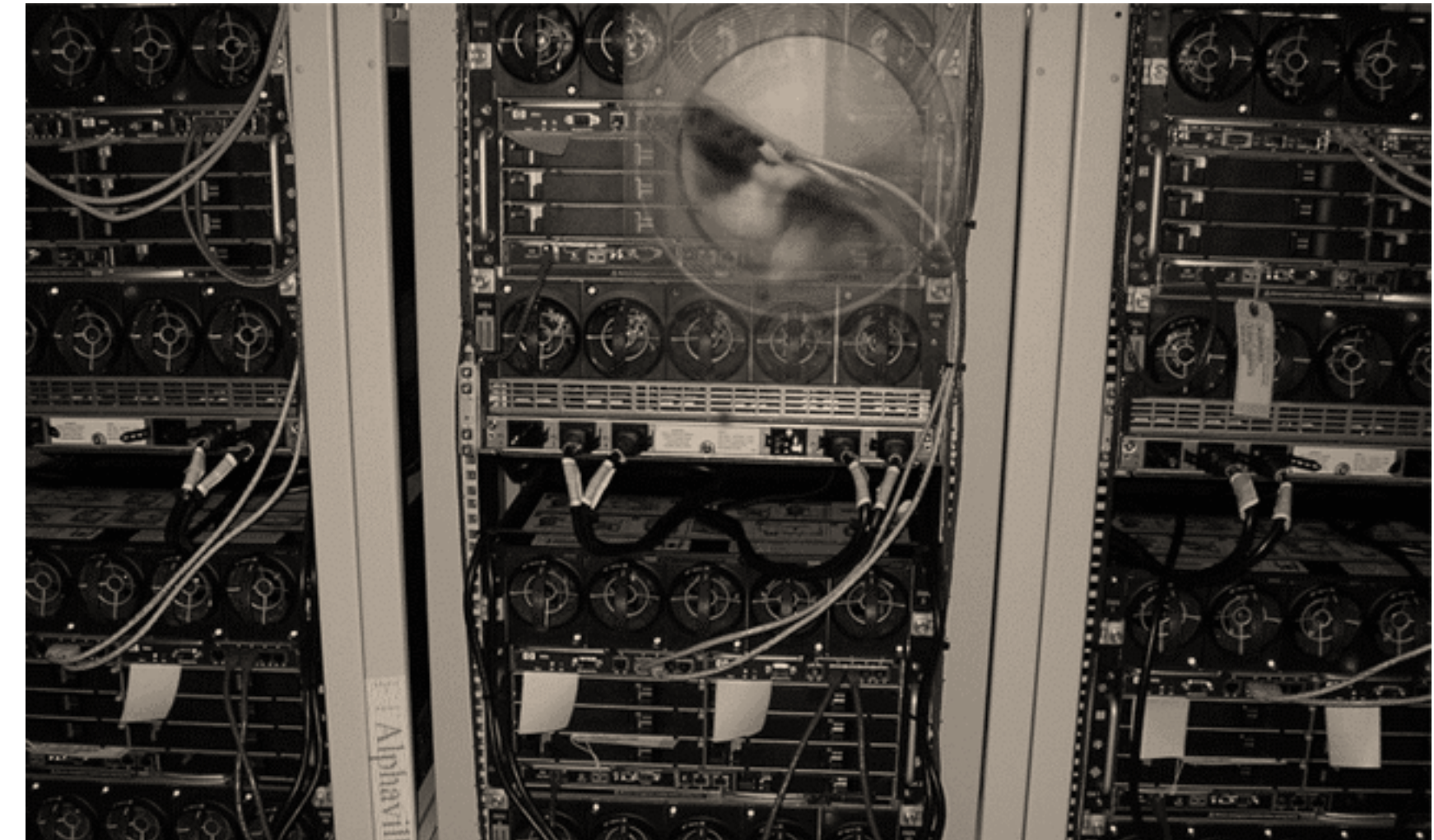
Reason
- "Cheaper" then upgrading.
- Replace if it dies.
- "Good enough"

Issues
- CPUs unable to run VISION quickly.
- Not enough bandwidth when attempting to provide data to multiple remotes simultaneously.
- Slow mass storage.
- Slow networking.

Result
- Productivity Drain
- Harder to repair – lack of parts, cost of service.

HARDWARE 2024

HP Enterprise servers are slowly transitioning from Gen10 to Gen11.

Three Models

Intermediate Tower –Small to Medium Labs

ML30

Rack Mounted / Large Tower – for large labs

DL360 / ML350

HARDWARE 2024

Virtual Servers

Virtual servers are supported and must be provisioned and supported by the lab or lab group.

- Updates/patches for both host and virtual instances.
- Antivirus/Malware installation, monitoring, and remediation.

The nature of virtual environments precludes our ability to offer the same support as with a physical server.

- DVI will provide support for VISION software only.
  - Access to both virtual main and backup servers must be provided when required to support VISION.
- DVI cannot install operating system (OS) updates or patches.
- Network issues cannot be resolved if outside the virtual server.

Microsoft Hyper-v

vmware®

BACKUP & RECOVERY

Old Backup Process

- Required the backup server to send web backups to DVI.
- Required labs to set cycling switch if a mid-day backup was required.
- Used external media as a part of the backup process.

Current Backup Process

- A backup is created from snapshots created on the server and is sent to the DVI cloud.
  - This backup is also sent to the backup server.
  - Mid-day backup doesn't require the cycling switch to be set.
  - Pulse backups occur every 5 minutes.
- External media is no longer required.

DATA SECURITY

In 2023 there was a cyberattack of some sort every 39 seconds.

- Malware

  - Viruses, worms, Trojans, spyware, adware

- Phishing

  - Deceptive, Spear, Whaling, Pharming

- Ransomware

As of April 2024:

5,136,645,282 known records (files, documents, private information, etc.) were breached. *

*Ford, N. (2024,April 16). *Data Breaches and Cyber Attacks in 2024 in the USA.* IT Governance USA. https://www.itgovernanceusa.com/blog/data-breaches-and-cyber-attacks-in-2024-in-the-usa

DATA SECURITY

Trends

- Malware jumped 11% year-over-year, encrypted threats up 117%, and cryptojacking up 659% in 2023.*

- Rise in network attacks.

- Almost half of all malware arrives in encrypted traffic.

- Half of all malware is a zero-day attack.

- In March 2024 the most prevalent malware was "FakeUpdates", an onscreen message advising an immediate program update, but would download malware instead.
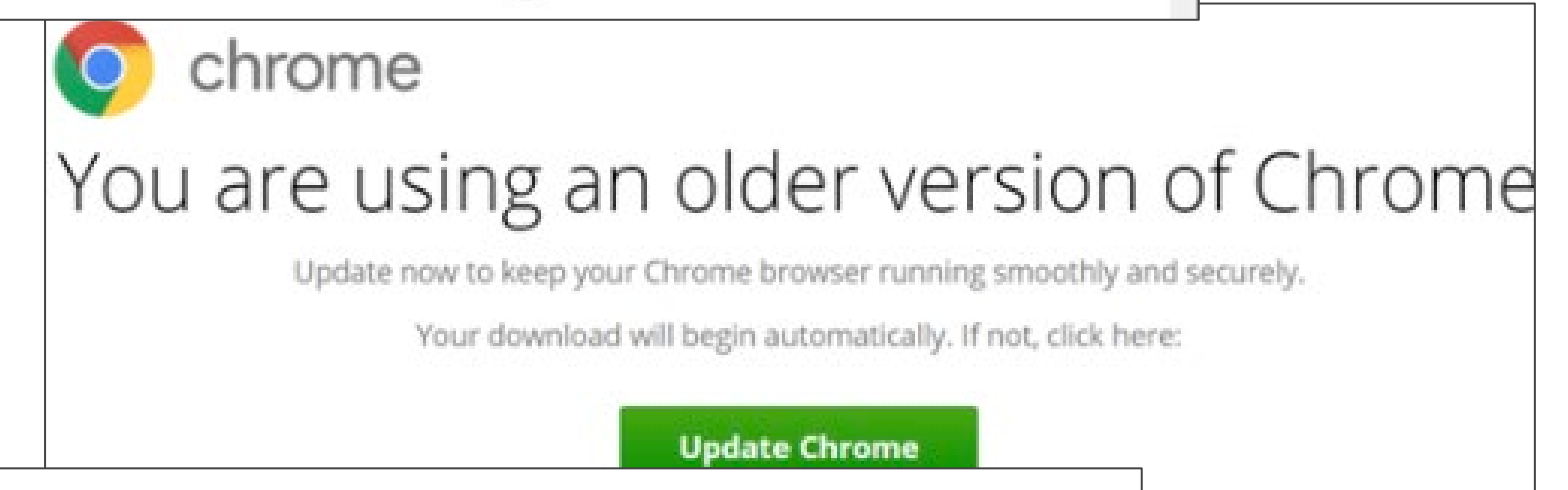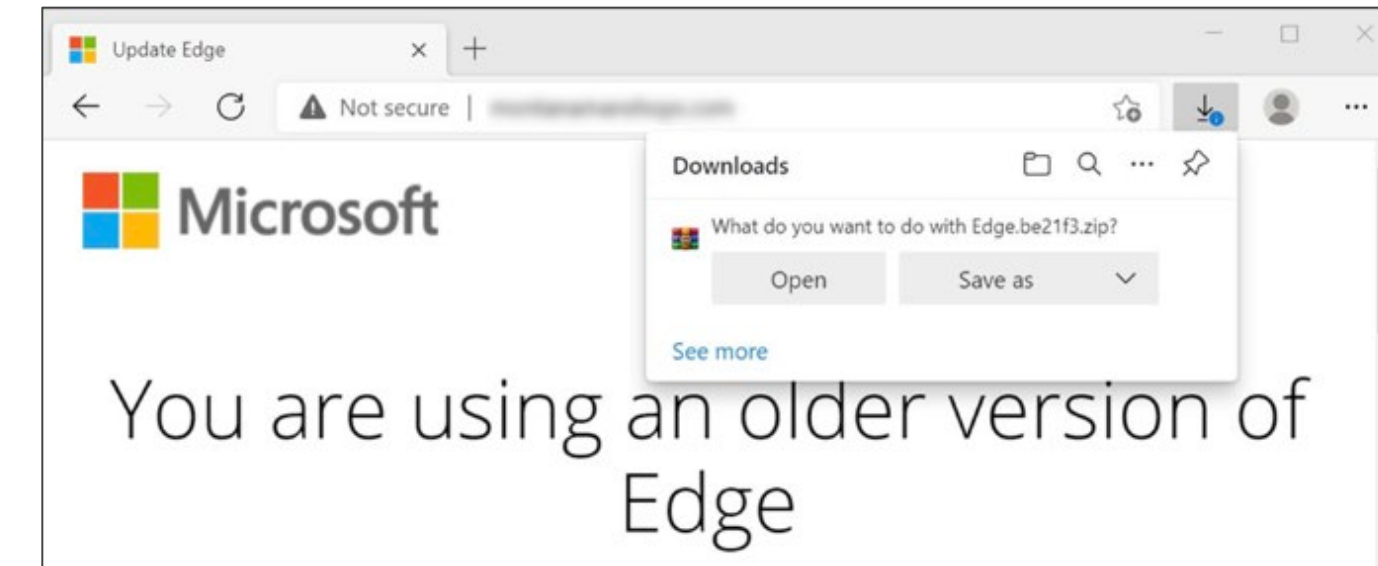

*SonciWall. (2024). *2024 SonicWall Cyber Threat Report*. [Report]. https:// https://www.sonicwall.com/threat-report/

DATA SECURITY

Rate of Ransomware Attacks by Industry

Percentage of organizations hit by ransomware in the last year

Ransomware hasn't gone away. While Business and Professional Services have seen less attacks, Healthcare, IT Technology, and Manufacturing have seen increases.

Sophos. (2024). *The State of Ransomware 2024* [White paper]. https://www.sophos.com/en-us/content/state-of-ransomware
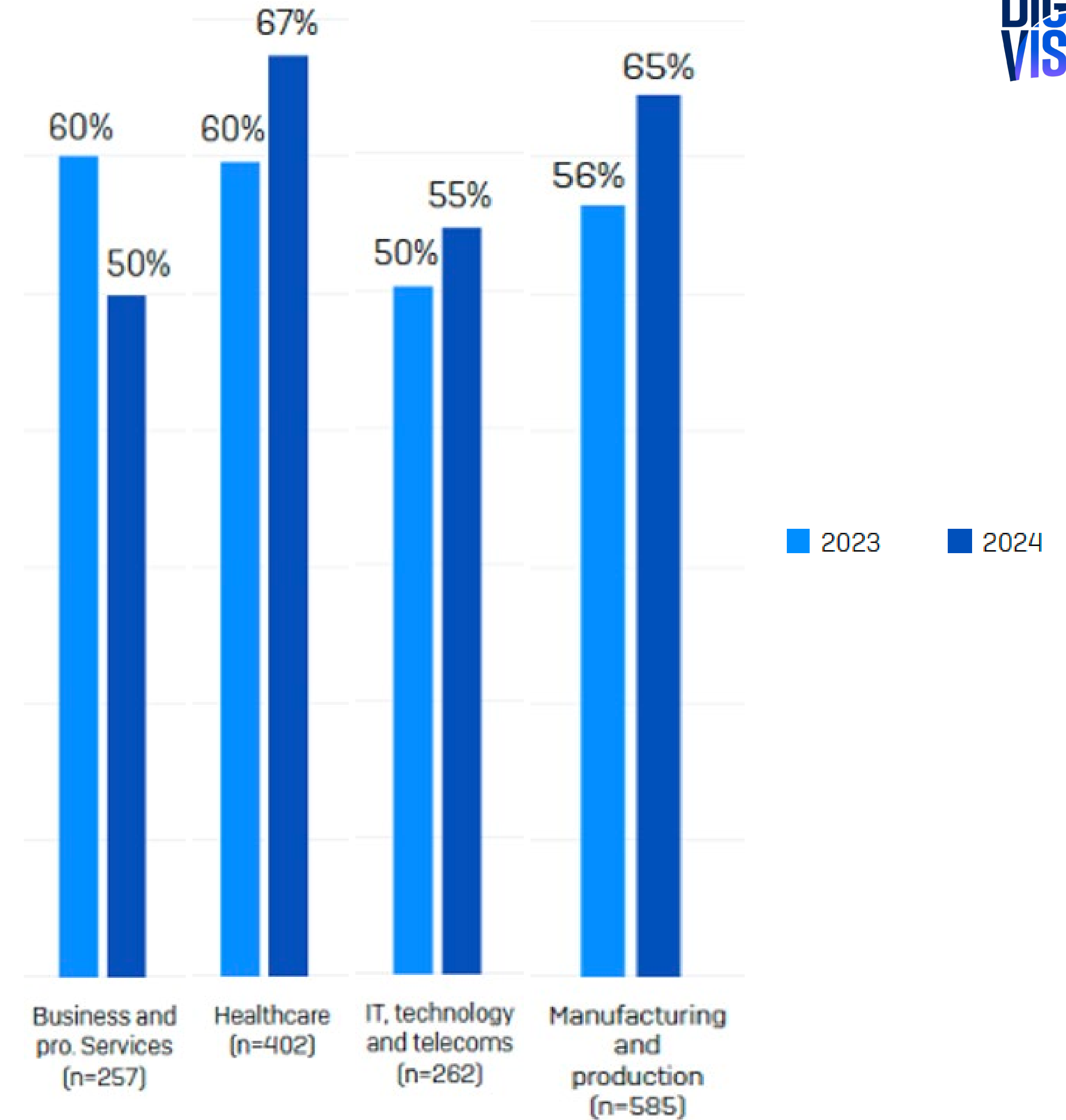
DATA SECURITY

Ransomware methods of entry

Known software or hardware vulnerability

- Keep software and hardware up-to-date

Compromised credentials

- Control access to your personal and company credentials.
- Don't share credentials in public forums such as conference calls, texts, and emails.

Email

- Don't open attachments unless you expect them.
- Don't click on internet links.
- Have malware detection software inspect incoming emails.

DATA SECURITY

Phishing

According to CISA.gov, 90% of successful cyber-attacks start with a phishing attack.

- Less security and IT support investments by small businesses have increased the odds of being the focus of a phishing attack.
- AI tools such as ChatGPT are being used to create legitimate and persuasive sounding emails.
- Deepfake video and audio are being used to impersonate someone you know.
- Mobile phone phishing attacks include social media, messaging, or fake apps.
- If you didn't initiate contact NEVER provide personal information over the internet or phone.
- Be suspicious of urgent requests or demands.
- Don't presume internal emails are safe, especially if there's an attachment.

OS VERSIONS

- Having current OSes on your workstations and servers is vital for increased security, and software reliability.
- Current OSes allow DVI to build software utilizing the latest tools for faster, more reliable, feature rich software.

CURRENT SERVER OPERATING SYSTEMS
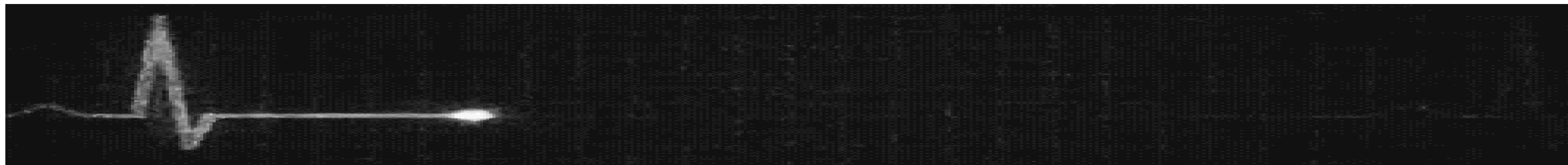
Windows Server 2022

Mainstream End Date: 10/13/2026 Extended End Date: 10/14/2031

LEGACY SERVER OPERATING SYSTEMS

- Windows Server 2016 – Mainstream End Date: 01/11/2022 Extended End Date: 01/12/2027

- Windows Server 2012 – Mainstream End Date: 10/09/2018 Extended End Date: 10/10/2023
- Windows Server 2008 – Mainstream End Date: 01/13/2015 Extended End Date: 01/14/2020

CURRENT WORKSTATION OPERATING SYSTEMS

- Windows 11 – Start Date: 10/04/2021 Retirement Date: 2031?
- Windows 10 – Start Date: 01/29/2015 Retirement Date: 10/14/2025

LEGACY WORKSTATION OPERATING SYSTEMS

- Windows 8.1   – Mainstream End Date: 01/09/2018 Extended End Date: 01/10/2023
- Windows 7   – Mainstream End Date: 01/13/2015 Extended End Date: 01/14/2020
- Windows Vista – Mainstream End Date: 04/10/2012 Extended End Date: 04/11/2017
- Windows XP   – Mainstream End Date: 04/14/2009 Extended End Date: 04/08/2014

SERIAL HUB

Digi International

Digi Connect EZ 16

- Replaces Comtrol serial hubs.
- Does not require serial adapters on the serial hub side.
- Serial adapters are still required on the device side.

DIGITAL VISION

THANK YOU

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