SIMformation

COVID-19 Changing How Companies Operate

COVID-19 has swept away long-established operations and processes, forcing IT to quickly identify and deploy acceptable alternatives. Now, as the virus threat appears to be gradually receding, business executives are viewing a radically transformed landscape, wondering how essential operations and practices will fit into a "new normal" business world. With basic changes already appearing, here's a look at seven ways that COVID-19 has permanently transformed technology and the workplace environment.

1. Agility is now a necessity

COVID-19's sudden arrival shook enterprises to the core, forcing many to search for alternatives to long-established business operations. Agility quickly became the highest priority. Companies needed to adapt to a fully unified online/offline world, valuing resilience over pure cost, and IT agility became indispensable. However, the pandemic showed IT leaders that it's possible to safely transform key operations and services at a previously unimaginable pace. The ability to scale up, scale down while being very cost conscious has become key to IT.

2. Digital transformation leaps forward

While many enterprises were already planning digital transformation initiatives in early 2020, COVID-19's arrival placed pressure on them to pick up the pace. Social distancing, remote work, and restricted contact for any activity, forced businesses to adopt a digital presence they didn't have before. Driven by necessity, IT leaders began investigating promising tools such as AI-based self-learning models. Even once relatively minor initiatives, such as automated project time entry and employee onboarding processes, suddenly became imperatives during the pandemic.

3. Collaboration is now routine

The pandemic drove home the need for companies to deepen and strengthen their collaborative ecosystems. This is a permanent shift that was trending before COVID hit, and has significantly accelerated. COVID-19 forced enterprises to recognize the value inherent in collaboration. Vendor management, for example, demands an ability to clearly articulate needs and to accurately measure each vendor's performance.

4. Threat awareness is now enhanced and expanded

COVID-19's sudden arrival, combined with its lack of predictability, caught most executives off guard. Technology-rooted emerging threats, such as ransomware and denial of service attacks, generally give compamies at least a few clues as to what to expect and how to prepare and react. But COVID-19 hit hard and suddenly, upending critical operations within a matter of days. There simply wasn't time to do six-month assessments on different technology options, or to build a long-term roadmap for compliance.

Learning from this experience, a growing number of leaders are beginning to treat communicable threats, like COVID-19, with the same level of importance as natural disasters, by including defined strategies within their business continuity/disaster recovery plans. "

5. IT is accepted as a business solutions driver

When the pandemic crippled long-standing business operations, IT stepped forward to provide solutions. For example, retailers like Home Depot and Costco added curbside pickup; restaurants like McDonald's added curbside and new delivery options; telecommunications products, like Zoom or Teams, had to add orders of magnitude in terms of scale as well as new features. Businesses that were able to make the changes quickly and effectively were not only able to survive, but thrive. Yet COVID-19 also raised enterprise expectations. Now that businesses know what's possible there will be much less tolerance of long lead times, delays, and excuses for not being able to deliver.

6. IT is now viewed as a financial innovator

COVID-19 allowed IT to take the lead in financial innovation, particularly in tech-driven areas such as contactless commerce. The pandemic increased consumer demand for the ability to transact and process payments without touching cash, cards, or keypads. What made this development so significant is what would have taken years, took only a few short months, as contactless payment use rose 150% in 2020.

7. A new workforce is appearing

Suddenly finding themselves managing dispersed teams and facing an array of unprecedented new challenges, many companies began recognizing the need for a new type of exmployee – self-starters who can work with little supervision and engage and collaborate without standing next to someone. A shift in personnel and collaboration requirements opens the door to more flexible talent and value creation opportunities. This means that executives need to be prepared to enable the entire business to work with more agility.

As companies adapt to the new business environment, IT will continue to evolve, as well. We have seen the move to a distributed workforce, and will continue to provide products and services to complement the remote worker as well as our core offerings for your corporate network. Security and access will still be critical to make this new reality seamless, and SIM2K will work with you to make the best of this situation.

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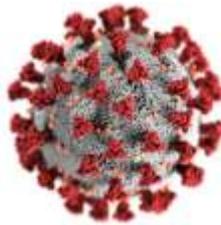
Windows and Chrome Only?

Tech experts have been predicting that Google's Chrome OS would become Microsoft's Windows top competitor, not Apple's MacOS, and that "most of us will be moving to cloud-oriented operating systems" – which seems to be finally coming true. According to IDC's latest PC sales numbers, by 2020's fourth quarter, Chromebooks were outselling Macs by two-to-one.

In the fourth quarter of last year, Windows had 76.7% of the market; macOS had 7.7%; and Chrome OS had 14.4%. For 2020 year-over-year compared to 2019, Windows lost 4.9 percentage points, from 85.4% to 80.5%; macOS was up 0.8 percentage points, from 6.7% to 7.5%; and Chrome OS established itself firmly in second place by jumping 4.4 points, from 6.4% to 10.8%. In its analysis of the 2020 personal computing device market, research firm Canalys reported that Chromebook vendors' overall market almost quadrupled in size over the same period a year earlier.

Why? Because of the coronavirus, 2020 was the year where almost all of our children "went" to school virtually via Chromebooks. As a Canalys spokesman explained: "With many countries being forced to accelerate their digital education plans in the wake of additional lockdowns, schools and universities are clamoring for easy-to-deploy solutions, and Google's digital offerings for education are proving quite popular over rival platforms, especially in the US and Western Europe."

Canalys also found, to no surprise, that Chromebooks were also wildly popular with small and medium-sized businesses that just needed cheap computers that work and are easy to manage. The difficulties of moving an entire workforce from the office to working from home, buying and then administering a slew of Windows machines made moving to Chromebooks an easy choice for many companies.

As another indication of this shift, Google recently bought Neverware, which makes its own Chrome OS version companies can use to update older Windows PCs with a brand-spanking-new copy of Chrome OS. With it, companies can take their old Windows 7 machines, or a Mac, and repurpose them into perfectly fine Chrome OS PCs. This is an interesting option for many businesses that lets them get years more work out of older machines that did not have the proper specifications for running Windows 10.

Google is also making it easier than ever to manage the Chrome browser with Chrome Browser Cloud Management. It enables users to view and manage bookmarks; track Chrome versions; report on Chrome apps and extensions; and remotely troubleshoot and clear browser data.

While industry experts don't see Chromebooks overtaking Windows anytime soon, they do see the combination of Chromebooks and Windows DaaS (their Cloud-based version of Windows) operating system nudging out stand-alone Windows PCs by 2026.

Firefox Gets New Features

Mozilla has released Firefox version 86, adding multiple picture-in-picture video viewing and bolstering the browser's anti-tracking defenses by isolating all cookies in the sites that create them.

Firefox's picture-in-picture mode debuted early in 2020, letting users deposit a frame on the desktop, video inside, from most – but not all – in-tab videos. The frame could be moved and resized at will, and was independent of the tab. The lastest version expands this capability: Users can crank out several frames, each showing a different video, each able to be positioned anywhere on the desktop. As long as the originating tab remains open, the video will continue playing.

Applications of this may be tougher to come up with than one might think, but multiple frames would be great for following several networks' coverage of a major event, say with the audio off on all but one, or for watching – or just keeping track of – several play-off games simultaneously.

The other addition is called "Total Cookie Protection," which confines cookies to the site where they were created, which prevents tracking companies from using these cookies to track browsing from site to site. The last upgrade before this locked up so-called "supercookies," identifiers that actually aren't cookies but trackers based on sometimes-obscure elements in a browser, such as HSTS flags. This month's release expanded on its predecessor's efforts by siloing all cookies.

Together, the previous supercookie isolation and the newer, more inclusive cookie quarantining, said Mozilla, block sites "from being able to 'tag' your browser, thereby eliminating the most pervasive cross-site tracking technique."   The feature is not enabled by default in Firefox. Instead, users must go to Preferences and the "Privacy & Security" section and select the Strict option under "Enhanced Tracking Protection."

Because Firefox updates in the background, most users can just relaunch the browser to get the latest version. To manually update on Windows, pull up the menu under the three horizontal bars at the upper right, then click the help icon (the question mark within a circle). Choose "About Firefox." The resulting page or pop-up shows that the browser is either up to date or displays the refresh process.

Microsoft "Chromium Edge" Takes Over

In other browser news, Microsoft has announced the April cumulative update for Windows 10 will remove the original, outdated Edge browser and replace it with the newer Chromium-based Edge that debuted a year ago. Users who accept April's update, which will include, as does every Patch Tuesday update, the month's fixes for security flaws, will then also receive Chromium Edge and lose the legacy Edge. The older browser launched in mid-2015 as the default browser for Windows 10. Skipping the April update will do no good, as every cumulative update issued after April 13 will also include the old-Edge for new-Edge swap. Many users may already have the new version active, but if not, don't be surprised at this shift

Android Malware Targets 2FA

Security researchers say that an Android malware strain can now extract and steal one-time passcodes (OTP) generated through Google Authenticator, a mobile app that's used as a two-factor authentication (2FA) layer for many online accounts.

Google launched the Authenticator mobile app in 2010. The app works by generating six to eight-digits-long unique codes that users must enter in login forms while trying to access online accounts.

Google launched Authenticator as an alternative to SMS-based one-time passcodes. Because Google Authenticator codes are generated on a user's smartphone and never travel through insecure mobile networks, online accounts who use Authenticator codes as 2FA layers are considered more secure than those protected by SMS-based codes.
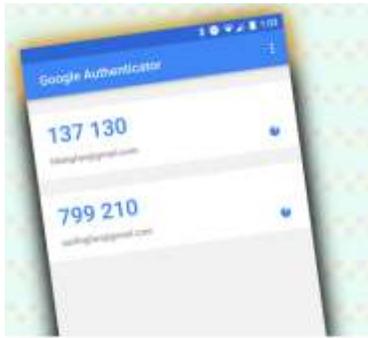
In a report published this week, security researchers from security firm ThreatFabric say they've spotted an Authenticator OTP-stealing capability in recent samples of Cerberus, a relatively new Android banking trojan that launched in June 2019.

"Abusing the Accessibility privileges, the Trojan can now also steal 2FA codes from Google Authenticator application," the ThreatFabric team said. "When the [Authenticator] app is running, the Trojan can get the content of the interface and can send it to the [command-and-control] server."

ThreatFabric said this new feature is not yet live in the Cerberus version advertised and sold on hacking forums. "We believe that this variant of Cerberus is still in the test phase but might be released soon," researchers said.

All in all, the ThreadFabric team points out that current versions of the Cerberus banking trojan are very advanced. They say Cerberus now includes the same breadth of features usually found in remote access trojans (RATs), a superior class of malware.

These RAT features allow Cerberus operators to remotely connect to an infected device, use the owner's banking credentials to access an online banking account, and then use the Authenticator OTP-stealing feature to bypass 2FA protections on the account – if present.

ThreatFabric researchers believe the Cerberus trojan will most likely use this feature to bypass Authenticator-based 2FA protections on online banking accounts, however, there's nothing stopping hackers from bypassing Authenticator-based 2FA on other types of accounts. This includes e-mail inboxes, coding repositories, social media accounts, intranets, and others.

Historically, very few hacker groups and even fewer malware strains have ever had the ability to bypass multi-factor (MFA) authentication solutions. If this feature will work as intended and will ship with Cerberus, this will put the banking trojan in an elite category of malware strains.

"Random Tid-Bytes"

New Webex Features

Having announced more than 50 planned innovations at its WebexOne event in December, one is now rolling out – real-time language translation. The feature will be available in Webex as a preview starting this month, with general availability in May. Users of the platform will soon be able to have their in-meeting speech translated in real time from an expanded library of over 100 languages, including Maori, Zulu and Armenian. The plethora of new languages underlines Cisco's aim to "power an inclusive future for all." Cisco claims that accuracy rates with real-time transcription are "starting to get exciting." Some of the other new features coming include:
- Meeting layouts that will be customizable, offering participants options beyond gallery or speaker view.
- New templates that allow users to select the type of meeting they want to host beyond traditional 30-minute time blocks. (Quick-sync meetings can be limited to a few minutes, with a visible countdown clock; round-table meetings allow users to speak uninterrupted for a set time limit in order.)
- Higher-quality video meetings that benefit from noise cancellation, speech enhancement, transcriptions and closed captioning, real-time translation, and more immersive sharing capabilities.
- In-meeting gestures that can be powered by body movement recognition.

Seperately, the company late last year made changes designed to position the platform as more of a direct competitor to Slack, Microsoft Teams and Google Meet. Users of the new Webex will be able to call, meet and message in one app via Webex Teams.

Phishing Study Provides Insight

Google and researchers at Stanford University have released an in-depth study analyzing 5 months of phishing/malware mails sent globally. "Who is targeted by email-based phishing and malware? Measuring factors that differentiate risk" looked at more than a billion mails. After digging in to phishing and malware campaigns automatically blocked by Gmail, researchers discovered quite a few things about current trends and happenings in the world of phishing.
- 42% of attacks target users in the US
- 10% target users in the UK
- 5% of attacks target users based in Japan

Attacks primarily focus on North America and Europe, with the US receiving the highest volume of phishing and malware mails. However, the highest risk countries are in Africa and Europe. According to the study, 16 countries exhibited a higher risk on average than the US. Campaigns are "fast churn". One particular template may be sent to 100 –1,000 targets, with campaigns lasting one to three days on average. In one week, small campaigns can account for more than 100 million phishing/malware mails targeting Gmail users. The risk of being targeted increases a little as people move upward through each age group. Those in the 55-64 bracket are potentially a more attractive proposition than someone sitting in the 18-24 or 35-44 age ranges. Whether this is due to older users being theoretically more susceptible to scams, or simply that their online footprint is easier to find, is not decided either way. Previous data breaches bump up the risk. You have far higher odds of being attacked if your details have been exposed in a data breach. So be alert to scam e-mails and do not click on any attached documents or files if you do not understand what the extension is or do not get attachments on a regular basis.

USB-C Taking Over

You've probably noticed something strange about many of the latest phones, tablets and laptops at your company: The familiar rectangular Type-A USB ports are gone, replaced by smaller oblong connectors. USB-C has taken over at work, at home and at school.

While many iPhone and iPad models stick with Apple's proprietary Lightning connector, USB-C is now part and parcel of most laptops, phones and tablets made today. Even the latest MacBooks and Chromebooks are part of the movement to USB-C.

USB Type-C, usually referred to as just USB-C, is a relatively new connector for delivering data and power to and from computing devices. Because the USB-C plug is symmetrical, it can be inserted either way, eliminating the frustrations of earlier USB ports and putting it on a par with Apple's reversible Lightning plug.

This alone makes it an improvement over the "old" USB connector, but USB-C is closely linked to several powerful new technologies, including Thunderbolt and USB Power Delivery, that can change how we think about working at home or on the road.

Most USB-C ports are built on the second-generation USB 3.1 data-transfer standard, which can theoretically deliver data at speeds of up to 10Gbps – twice as fast as USB 3.0 and first-gen USB 3.1, which both top out at 5Gbps. The key is to get devices that say "USB 3.1 Rev 2," "USB 3.1 Gen 2," "SuperSpeed USB 10Gbps," or "SuperSpeed+" to get support for the faster spec.

To make sure the data gets through at higher speeds, always get high-quality cables. They will often have the SuperSpeed logo and a "10" on them to show they're capable of moving 10Gbps. The good news is that there's a good chance that this spaghetti bowl of cable standards could disappear with the next rev of the USB spec with a universal USB cable.

A big bonus is that on many laptops and desktops, the USB-C specification also supports Intel's Thunderbolt 3 data-transfer technology. A USB-C port equipped with Thunderbolt 3 can push data speeds to a theoretical limit of 40Gbps. To show how far we've come, that's four times faster than USB 3.1 and more than 3,000 times faster than the original USB 1 spec of 12Mbps.

With increased data-transfer speeds comes the ability to push video over the same connection. USB-C's Alternate Mode (or "Alt Mode" for short) for video enables adapters to output video from that same USB-C port to HDMI, DisplayPort, VGA and other types of video connectors on displays, TVs and projectors. It pays huge dividends for the ultramobile among us by allowing many recent phones and tablets, such as the Samsung Galaxy Tab S7+ and Note and Tab 6 systems, to directly plug into a monitor at home or a projector in the office.

What's more, USB-C supports the USB Power Delivery (USB PD) specification. A USB 2.0 port can deliver just 2.5 watts of power, about enough to charge a phone, slowly. USB 3.1 ups this figure to about 15 watts. But USB PD can deliver up to 100 watts of power, more than six times what USB 3.1 can. This opens up the potential for laptop-powered projectors based on USB-C, but today it is mostly used for high-power chargers and external battery packs.

In the here and now, you'll need to make some changes and buy some accessories to take full advantage of USB-C. Be careful, because not all USB-C devices support all of the latest USB-C specs. For instance, just about every USB-C flash drive supports the earlier USB 3.1 Rev 1 protocol, some tablets and phones don't support Alt Mode video, and we are in the early days of USB Power Delivery, with few devices going beyond 40 or 60 watts. In other words, read the spec sheet carefully so you know what you're getting before you buy.

There's no shortage of USB-C flash drives for those who like to carry their data with them. The best part is that all you do is insert the drive, and after it is assigned a drive letter, its capacity is available. However, most USB-C drives, like SanDisk's Ultra Dual Drive USB Type-C, still rely on the USB 3.1 Rev 1 hardware that limits its speed to 150Mbps.

Extreme data needs can take another approach: carry a large-capacity external drive, like a SSD. Thes approach the size of a deck of cards, and weigh about 2 ounces, but the small size does not restrict capacity. They can hold between 256GB and 1TB of data on flash storage chips and use the USB 3.1 Rev 2 hardware. According to HP, their SSD external drive can move data as fast as 8Gbps and comes with the cables you'll need to connect it with a computer, old or new. It costs about $100 for 500GB.

Another new use is the ability to link an external monitor to a device, like a smartphone, using USB-C. This way, for example, you can share information off your phone in a meeting, and not have to lug in laptops, HDMI or DVI cables and power cords, you just need a compatible monitor and a good USB-C cable. Not all monitors have this capability as of yet, so be careful and look at the specs before you jump into this. AOC currently sells a 15.6" monitor that supports USB-C display and power, if you are interested.

With USB-C accepted as the de facto connector today, the next step is USB4. It can move up to 40Gbps, provide at least 15 watts of power for accessories, and support two 4K displays or a single 8K display. To its credit, USB4 will continue with the small oblong connector that USB-C brought to the party and will work with existing devices, including USB 2.0 with the right adapter. USB4 uses the Thunderbolt 4 spec. It sets up bidirectional lanes of data that should help things like videoconferencing, which require two-way data flow to prevent congestion and jams.

These new specifications are helping to speed data and power transfer while reducing the "cable clutter" of differing protocols, making our lives easier!