

ANDERSON MORGAN PRESENTS

SERVER

DISASTER VS BUSINESS CONTINUITY

WILL YOUR COUNCIL SURVIVE WITHOUT IT?

OPEN^{5PM} ENTRY \$10 FIRST FIGHT^{8PM}

FOR MORE INFORMATION: 555-555-5555 / YOUREMAIL@EMAIL.COM

102 BOXING STREET, DEVONPORT, TAS 7320

PARNAPLE



Andrew Roberts

Sales & Marketing Manager andrew.roberts@andersonmorgan.com.au

Nic Paley

Account Manager Nicholas.paley@andersonmorgan.com.au



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Disaster Recovery vs Business Continuity

What's the Difference?



Kultar Khatra

Sr. Channel Manager – VIC/SA/TAS
 kkhatra@datto.com
 linkedin.com/in/kultarkhatra

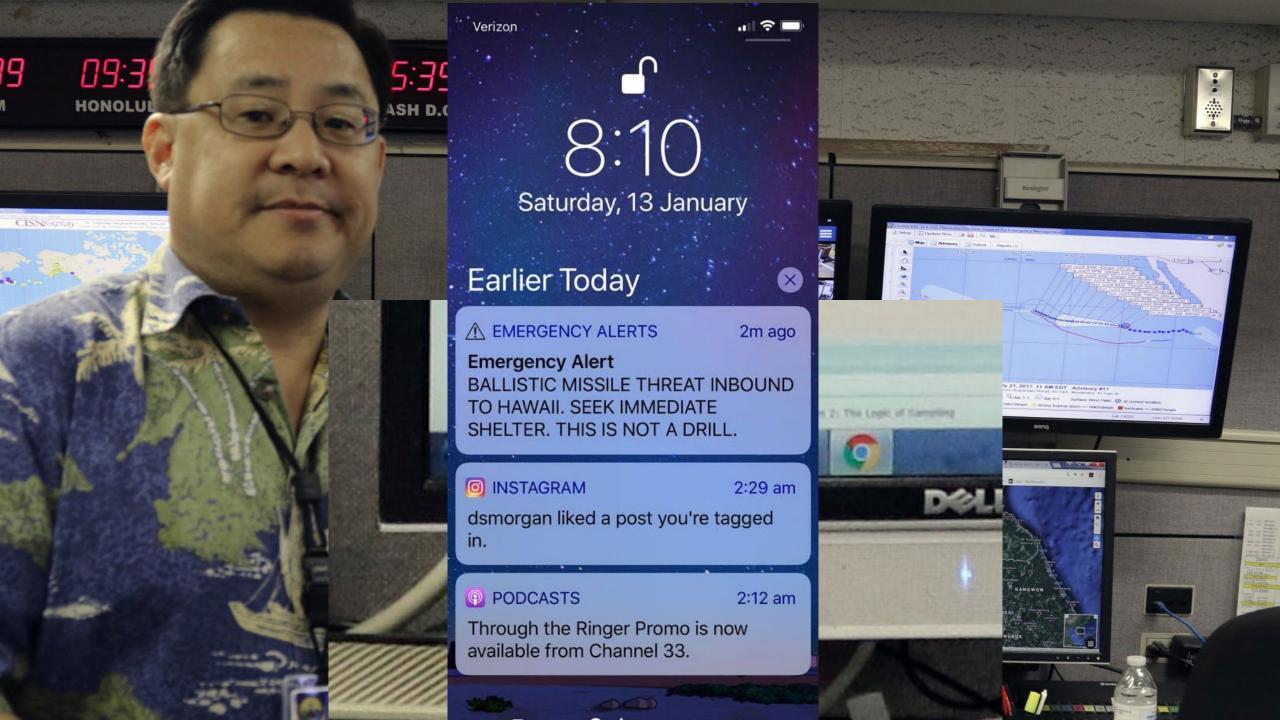


HOW MANY PEOPLE HAVE EXPERIENCED THESE DISASTERS?



Most Commonly Seen





Crypto/Ransomware

Fake Aussie AGL bill phishing continues

Australians continue to be targeted by email-enabled ransomware

ploys, with renewed reports of malware being spread by posing as

An alert provided by the government's Stay Smart Online website marks the second time in recent memory a ransomware campaign

By Michael Jenkin
Oct 20 2016
7:00AM

Ocomments

f

RELATED ARTICLES

10,000 Australians hit by

energy bill ransomware

Ransomware offers live chat 'help'

attacking Australian

has struck under the guise of an energy bill.

In June at least 10,000 people had reported being scammed by emails looking like AGL bills.

energy provider AGL's bills.

According to a blog post on Aussie cloud security provider Mailguard's website, the newest phishing attempt includes references to recent storms and flooding.

"In an effort to appear legitimate, the email says flooding victims may receive additional support to help pay their bill," poster Jaclyn McRae wrote.

"Those who make the mistake of clicking a link on the fake invoice





NEWS 🕅

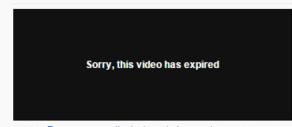
Cyber attacks: pharmacies, patient records targeted 'ransomware' attacks

www.abc.net.au/news/2014-01-16/australian-pharmacies-targeted-in-ransomware-attacks/5203970

By technology reporter Jake Sturmer and Alison McClymont Updated 17 Jan 2014, 5:27pm

Pharmacists have become the latest targets of sophisticated computer hacks known as ransomware attacks, which lock up PCs until victims pay up.

Once the hackers plant the virus, the files on a computer become encrypted and unable to be accessed.



VIDEO: Ransomware attacks target pharmacies (ABC News)

Crysis ransomware now attacking businesses in Australia and New Zealand

by Greg Masters | Wednesday 21 September 2016 | 1 Comment



The Sydney Morning Herald

Digital Life

Latest News Gadgets V Science Innovation Web Culture Gaming Security IT Pro

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'Locky' ransomware scam hits tens of thousands of Australian computers

March 11, 2016





Payment will be raised on

5/16/2017 00:47:55

Time Left

02:23:57:37

Your files will be lost on

5/20/2017 00:47:55

Time Left

06:23:57:37

About bitcoin

How to buy bitcoins?

Contact Us

Ooops, your files have been encrypted!

English

What Happened to My Computer?

Your important files are encrypted.

Many of your documents, photos, videos, databases and other files are no longer accessible because they have been encrypted. Maybe you are busy looking for a way to recover your files, but do not waste your time. Nobody can recover your files without our decryption service.

Can I Recover My Files?

Sure. We guarantee that you can recover all your files safely and easily. But you have not so enough time.

You can decrypt some of your files for free. Try now by clicking <Decrypt>.

But if you want to decrypt all your files, you need to pay.

You only have 3 days to submit the payment. After that the price will be doubled. Also, if you don't pay in 7 days, you won't be able to recover your files forever. We will have free events for users who are so poor that they couldn't pay in 6 months.

How Do I Pay?

Payment is accepted in Bitcoin only. For more information, click <About bitcoin>.

Please check the current price of Bitcoin and buy some bitcoins. For more information,

click <How to buy bitcoins>.

Check Payment

And send the correct amount to the address specified in this window.

After your payment, click <Check Payment>. Best time to check: 9:00am - 11:00am



Send \$300 worth of bitcoin to this address:

12t9YDPgwueZ9NyMgw519p7AA8isjr6SMw



Decrypt



Cryptolocker 2.0 Your personal files are encrypted Your important files were encrypted on this computer: photos, videos, documents, etc. You can verify this by click on see files and try to open them. Encryption was produced using unique public key RSA-4096 generated for this computer. To decrypt files, you need to obtain The single copy of the private key, which will allow you to decrypt the files, is located on a secret server on the Internet; the server

will destroy the key within 72 hours after encryption

Your personal files are encrypted by CTB-Locker. Your documents, photos, databases and other important files have been encrypted with strongest

encryption and unique key, generated for this computer.

Private decryption key is stored on a secret Internet server and nobody can decrypt your files until you pay and obtain the private key.

If you see the main locker window, follow the instructions on the locker. Overwise, it's seems that you or your antivirus deleted the locker program. Now you have the last chance to decrypt your

Open http://jssestaew3e7ao3q.onion.cab or http://jssestaew3e7ao3q.tor2web.org in your browser. They are public gates to the secret server.

If you have problems with gates, use direct connection:

- 1. Download Tor Browser from http://torproject.org/
- In the Tor Browser open the http://jssestaew3e7ao3q.onion/ Note that this server is available via Tor Browser only. Retry in 1 hour if site is not reachable.

www.cso.com.au/article/562658/over-9-000-pcs-australia-infected-by-torrentlocker-ransomware/

rints.

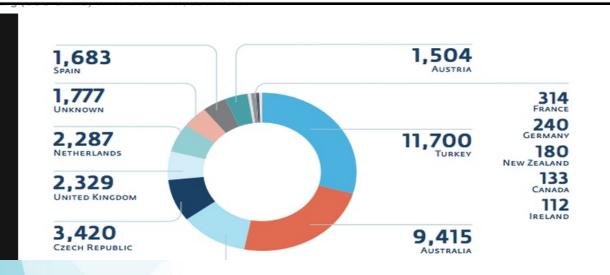
Restoring your files - The fast and easy way

To get your files fast, please transfer 1.0 Bitcoin to our wallet address 1LEiPqvh6S9VEXWV2dZTytSRd7e9B1bWt3. When we will get the money, we will immediately give you your private decryption key. Payment should be confirmed in about 2 hours after payment made.

Restoring your files - The nasty way

Send the link below to other people, if two or more people will install this file and pay, we will decrypt your files for free.

https://3hnuhydu4pd247qb.onion.to/r/0e72bfe849c71dec4a867fe60c78ffa5



CHINA NEWS

Alleged Chinese Hacking: Alcoa Breach Relied on Simple Phishing Scam

"...At least one employee will click on anything."

Alcoa Inc. AA -2.92% board member.

But Mr. Ghosn's name was slightly misspelled, and the attachment, billed as the agenda to a 2008 shareholders' meeting, actually held a computer virus that allowed Chinese hackers to allegedly steal nearly 3,000 emails, according to a federal indictment unsealed Monday.

The indictment makes the case, with an unusual level of detail, that many foreign cyberattacks often don't rely on sophisticated hacking technology. Rather, it says, the hackers primarily used an old trick, known as phishing—baiting a user to download malicious code allowing outsiders to spy on the machine. The charges illustrate an age-old security problem for U.S. companies: At least one employee will click on anything.

The latest ransomware is pure evil genius

Popcorn Time ransomware melds social engineering with technology to spread itself faster than ever

















Credit: Dbreen via Pixabay

Ransomware is always nasty business, but the latest variant discovered by the MalwareHunterTeam takes the nastiness to a whole 'nother level.

Turning victims into criminals

Apparently, the latest Popcorn Time ransomware adds a new twist to the standard M.O. of demanding payment from their victims or permanently lose access to their

RELATED



Much ado about the ransomware scourge



Stupid encryption mistakes criminals make



Ransomware as a Service fuels explosive growth



Setting up DLP features for email security.

Terrifying 'Popcorn Time' computer virus can only be removed by infecting TWO FRIENDS or paying a ransom

- Access to decryption key given after paying in Bitcoin or nominating two others
- Ransomware shares a name with programme that downloads and streams films
- Hackers claim to be using proceeds for 'food, medicine and shelter to those in need'

By LIBBY PLUMMER FOR MAILONLINE

PUBLISHED: 10:16 EDT, 12 December 2016 | UPDATED: 18:28 EDT, 12 December 2016













78 shares

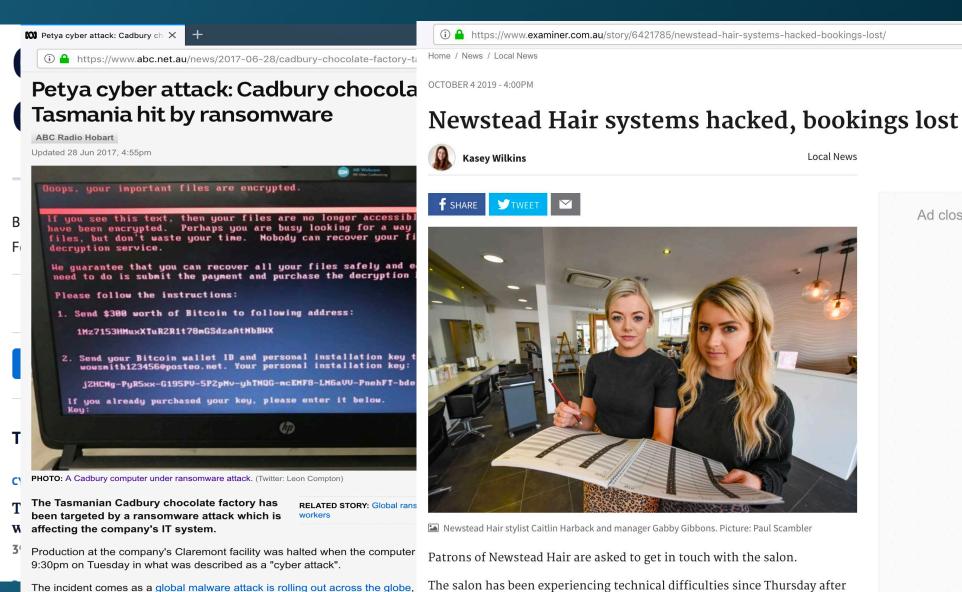


A menacing new computer virus leaves victims with a choice between paying hackers a ransom and infecting two friends' computers.



VIC/TAS is under attack

Russia's biggest oil company, disrupting operations at Ukrainian banks and sh



their systems were hacked.

Ad closed by Google

... ☑ ☆

datto

The Nation – is at risk



More to come.



PM Reveals Parliament Cyber Attack Happened Because Nobody Updated Norton Internet Security

SPORTS

MONEY LIFE

USA TODAY

TECH

TRAVEL OPINION



CROSSWORDS

ELECTIONS 2016





Ransomware attack hit San Francisco train system



Elizabeth Weise , USATODAY 11:29 a.m. EST November 29, 2016



125

in 95







The San Francisco Municipal Transportation Agency has contained a cyber attack that disrupted its ticketing systems over the Thanksgiving weekend. USA TODAY



ticket machines for San Francisco's light rail transit system offline all day Saturday during one of the busiest shopping weekends of the year, but rather than shutting down, the agency decided instead to let users ride for free. By Sunday the system was once again running normally.

SAN FRANCISCO — A ransomware attack took



come home to Kenmore® for reliability, service and performance

Trusted by American families for over 100 years.



HOW MUCH DID IT COST...

- ► They did not pay the \$73k in ransom (100 bitcoins) because they had proper backups
- ► However....
 - They did not have a continuity solution
 - Down 2 days (Friday & Saturday)
 - ▶ 735,000 rides a day offered for free
 - ▶ \$2.25 per ride

Lost \$1.65 million per day in revenue

BEYOND THE NUMBERS

- ▶ Reputation and Brand Damage
- Compliance and legal Implications
- Notifiable Data Breach Act (oaic.gov.au)
- ▶ Customer Retention
- ► Employee Productivity/Retention
- ▶ Peace Of Mind

NDBA - Background

- Came into effect on February 22, 2018
- Conducted by the Office of the Australian Information
 Commissioner (OAIC)
- Strengthens Australia's privacy laws
- 812 data breach notifications reported in 2018
 - 33% Human Error 64% Malicious Attacks



Office of the Australian Information Commissioner

Notifiable Data Breaches Quarterly Statistics Report

1 April – 30 June 2018

NDBs 2018/2019

| Quarter | Number of Notified Breaches | Human Error | Malicious/ Criminal Attacks | System Error |
|---------|-----------------------------------|-------------|--------------------------------|--------------|
| Q3 2018 | 245 | 37% | 57% | 6% |
| Q4 2018 | 262 | 33% | 64% | 3% |
| Q1 2019 | 215 | 35% | 61% | 4% |
| Q2 2019 | 245 | 34% | 62% | 4% |

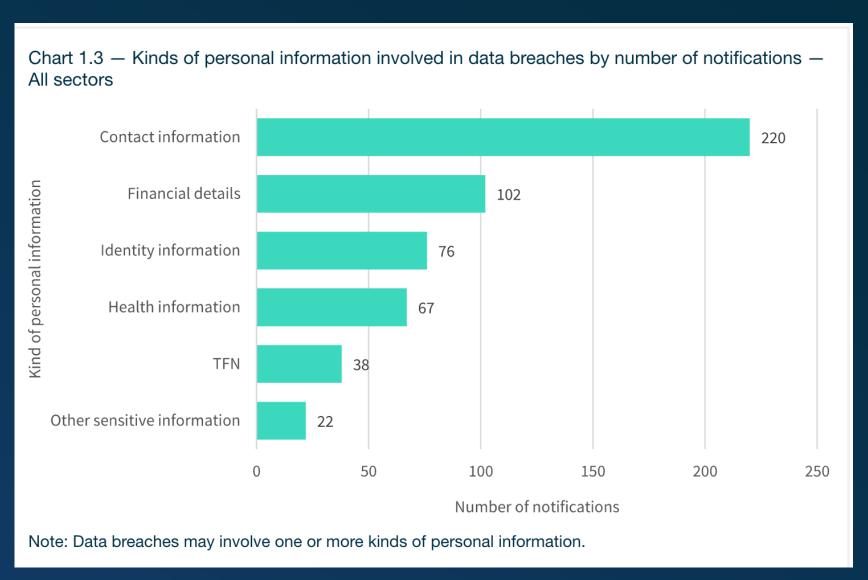
= 812 **notified** breaches in 2018

= 460 in Q1 + Q2 in 2019

(On average 18 reported breaches p/week to OAIC)

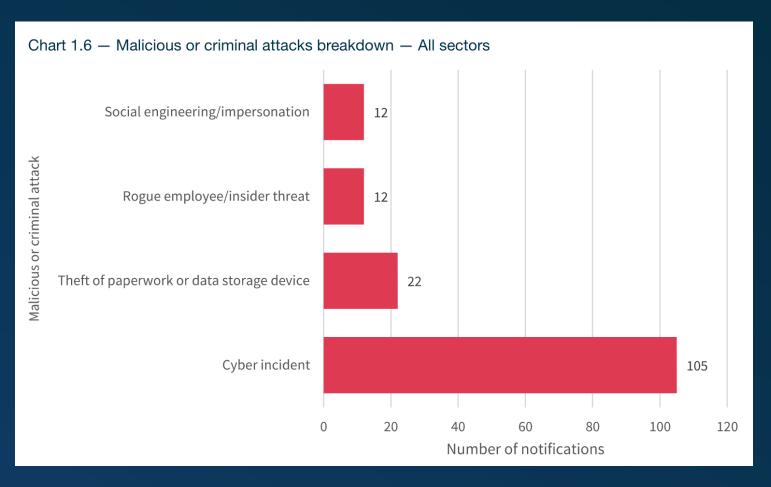
https://www.oaic.gov.au/privacy-law/privacy-act/notifiable-data-breaches-scheme/quarterly-statistics-reports/

Kinds of Personal Information Involved in Breaches Q2 2019

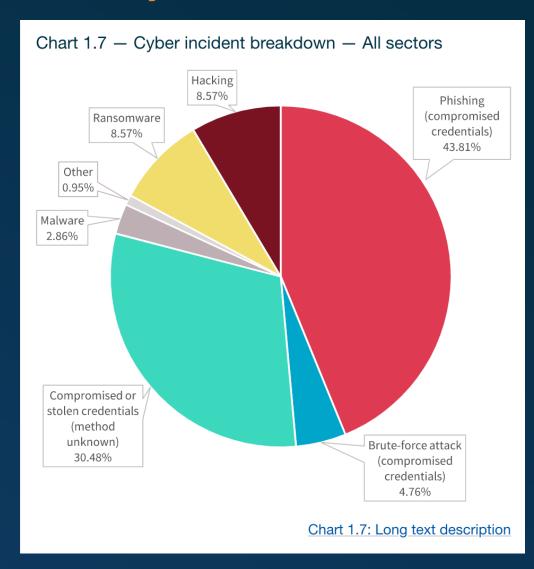


Q2 2019 - Cyber Incident Breaches

Malicious/Criminal Attack breakdown



Q2 2019 - Cyber Incident Breaches







Essential Eight Maturity Model

FEBRUARY 2019

Introduction

The Australian Cyber Security Centre (ACSC) has developed prioritised mitigation strategies, in the form of the **Strategies to Mitigate Cyber Security Incidents**, to help organisations mitigate cyber security incidents caused by various cyber threats. The most effective of these mitigation strategies are known as the Essential Eight.

Maturity levels

To assist organisations in determining the maturity of their implementation of the Essential Eight, three maturity levels have been defined for each mitigation strategy. The maturity levels are defined as:

- Maturity Level One: Partly aligned with intent of mitigation strategy
- Maturity Level Two: Mostly aligned with intent of mitigation strategy
- Maturity Level Three: Fully aligned with intent of mitigation strategy.



Essential Eight Maturity Model



Mitigation Strategies to Prevent Malware Delivery and Execution

Application whitelisting of approved/trusted programs to prevent execution of unapproved/malicious programs including .exe, DLL, scripts (e.g. Windows Script Host, PowerShell and HTA) and installers.

Patch applications e.g. Flash, web browsers, Microsoft Office, Java and PDF viewers. Patch/mitigate computer with 'extreme risk' vulnerabilities within 48 hours. Use the latest version of applications.

Why: All non-approved applications (including malicious code) are prevented from executing.

Why: Security vulnerabilities in applications can be used to execute malicious code on systems.

Configure Microsoft Office macro settings to block macros from the Internet, and only allow vetted macros either in 'trusted locations' with limited write access or digitally signed with a trusted certificate.

User application hardening. Configure web browsers to block Flash (ideally uninstall it), ads and Java on the Internet. Disable unneeded features in Microsoft Office (e.g. OLE), web browsers and PDF viewers.

Why: Microsoft Office macros can be used to deliver and execute malicious code on systems.

Why: Flash, ads and Java are popular ways to deliver and execute malicious code on systems.

Mitigation Strategies to Limit the Extent of Cyber Security Incidents

Restrict administrative privileges to operating systems and applications based on user duties. Regularly revalidate the need for privileges. Don't use privileged accounts for reading email and web browsing.

Patch operating systems. Patch/mitigate computers (including network devices) with 'extreme risk' vulnerabilities within 48 hours. Use the latest operating system version. Don't use unsupported versions.

Why: Admin accounts are the 'keys to the kingdom'. Adversaries use these accounts to gain full access to information and systems.

Why: Security vulnerabilities in operating systems can be used to further the compromise of systems.

Multi-factor authentication including for VPNs, RDP, SSH and other remote access, and for all users when they perform a privileged action or access an important (sensitive/high-availability) data repository.

Why: Stronger user authentication makes it harder for adversaries to access sensitive information and systems.

Mitigation Strategies to Recover Data and System Availability

Daily backups of important new/changed data, software and configuration settings, stored disconnected, retained for at least three months. Test restoration initially, annually and when IT infrastructure changes.

Why: To ensure information can be accessed following a cyber security incident (e.g. a ransomware incident).

| / | \sim | | Australian |
|--------|--------|---|----------------|
| /_ | | (| Cyber Security |
| \neg | \sim | | Centre |

| Maturity Level One | Maturity Level Two | Maturity Level Three |
|--|---|--|
| An application whitelisting solution is implemented on all workstations to restrict the execution of executables to an approved set. | An application whitelisting solution is implemented on all workstations to restrict the execution of executables and software libraries to an approved set. | An application whitelisting solution is implemented on all workstations to restrict the execution of executables, software libraries, scripts and installers to an approved set. |
| An application whitelisting solution is implemented on Active Directory servers, email servers and other servers handling user authentication to restrict the execution of executables to an approved set. | An application whitelisting solution is implemented on Active Directory servers, email servers and other servers handling user authentication to restrict the execution of executables and software libraries to an approved set. | An application whitelisting solution is implemented on Active Directory servers, email servers and other servers handling user authentication to restrict the execution of executables, software libraries, scripts and installers to an approved set. |
| Security vulnerabilities in applications and drivers assessed as extreme risk are patched, updated or mitigated within one month of the security vulnerabilities being identified by vendors, independent third parties, system managers or users. | | Security vulnerabilities in applications and drivers assessed as extreme risk are patched, updated on mitigated within 48 hours of the security vulnerabilities being identified by vendors, independent third parties, system managers or users. |
| Applications that are no longer supported by vendors with patches or updates for security vulnerabilities are updated or replaced with vendor-supported versions. | Applications that are no longer supported by vendors with patches or updates for security vulnerabilities are updated or replaced with vendor-supported versions. | An automated mechanism is used to confirm and record that deployed application and driver patches or updates have been installed, applied successfully and remain in place. |
| | | Applications that are no longer supported by vendors with patches or updates for security vulnerabilities are updated or replaced with vendor-supported versions. |
| Microsoft Office macros are allowed to execute, but only after prompting users for approval. | Only signed Microsoft Office macros are allowed to execute. | Microsoft Office macros are only allowed to execute in documents from Trusted Locations where write access is limited to personnel whose role is to vet and approve macros. |
| Microsoft Office macro security settings cannot be changed by users. | Microsoft Office macros in documents originating from the Internet are blocked. Microsoft Office macro security settings cannot be changed by users. | Microsoft Office macros in documents originating from the Internet are blocked. |
| | | Microsoft Office macro security settings cannot be changed by users. |
| Web browsers are configured to block or disable support for Flash content. | Web browsers are configured to block or disable support for Flash content. | Web browsers are configured to block or disable support for Flash content. |
| Backups of important information | n, software and configuration settings | are performed at least daily. |
| • | An application whitelisting solution is implemented on all workstations to restrict the execution of executables to an approved set. An application whitelisting solution is implemented on Active Directory servers, email servers and other servers handling user authentication to restrict the execution of executables to an approved set. Security vulnerabilities in applications and drivers assessed as extreme risk are patched, updated or mitigated within one month of the security vulnerabilities being identified by vendors, independent third parties, system managers or users. Applications that are no longer supported by vendors with patches or updates for security vulnerabilities are updated or replaced with vendor-supported versions. Microsoft Office macros are allowed to execute, but only after prompting users for approval. Microsoft Office macro security settings cannot be changed by users. Web browsers are configured to block or disable support for Flash content. | An application whitelisting solution is implemented on all workstations to restrict the execution of executables to an approved set. An application whitelisting solution is implemented on Active Directory servers, email servers and other servers handling user authentication to restrict the execution of executables to an approved set. An application whitelisting solution is implemented on Active Directory servers, email servers and other servers handling user authentication to restrict the execution of executables and software libraries to an approved set. Security vulnerabilities in applications and drivers assessed as extreme risk are patched, updated or mitigated within one month of the security vulnerabilities being identified by vendors, independent third parties, system managers or users. Application whitelisting solution is implemented on all workstations to restrict the execution of executables and software libraries to an approved set. An application whitelisting solution is implemented on Active Directory servers, email servers and other servers handling user authentication to restrict the execution of executables and software libraries to an approved set. An application whitelisting solution is implemented on Active Directory servers, email servers and other servers handling user authentication to restrict the execution of executables and software libraries to an approved set. An application whitelisting solution is implemented on Active Directory servers, email servers and other servers handling user authentication to restrict the execution of executables and software libraries to an approved set. An application whitelisting solution is implemented on Active Directory servers, email servers and other servers handling user authentication to restrict the execution of executables and software libraries to an approved set. An application whitelisting solution is implemented on Active Directory servers, email servers and other servers handling user authentication to restrict the execution of exec |

Patch operating systems

Multi-factor authentication

Full backup and restoration processes are tested at least once when initially implemented and each time fundamental information technology infrastructure changes occur.

Partial backup and restoration processes are tested on an annual or more frequent basis.

software certificates.

six or more characters, Universal 2nd Factor (U2F) security keys, physical one-time password (OTP) tokens, biometrics, smartcards or mobile app OTP tokens.

repositories.

Multi-factor authentication uses at least two of the following authentication factors: passwords with six or more characters, Universal 2nd Factor (U2F) security keys, physical one-time password (OTP) tokens, biometrics or smartcards.

Daily backups

Backups of important information, software and configuration settings are performed monthly, Backups are stored for between one to three months.

Full backup and restoration processes are tested at least once.

Backups of important information, software and configuration settings are performed weekly. Backups are stored offline, or online but in a non-rewritable and non-erasable manner.

Backups are stored for between one to three months.

Full backup and restoration processes are tested at least once.

Partial backup and restoration processes are tested on an annual or more frequent basis.

Backups of important information, software and configuration settings are performed at least daily. Backups are stored offline, or online but in a non-rewritable and non-erasable manner.

Backups are stored for three months or greater.

Full backup and restoration processes are tested at least once when initially implemented and each time fundamental information technology infrastructure changes occur.

Partial backup and restoration processes are tested on an annual or more frequent basis.

WHY SaaS PROTECTION?



1 in 3 COMPANIES HAVE EXPERIENCED DATA LOSS IN SaaS APPS

THE SHARED RESPONSIBILITY MODEL

Microsoft provides for the security of the cloud, and the tenant (partner) provides the security in their cloud.

SaaS VENDORS DON'T PROTECT USER DATA

Data Protection Responsibilities



Microsoft

Application • OS • Virtualization Hardware • Network



MSP

Users • Data • App Admin





Step 1: Make sure you have a backup of your files

We cannot guarantee that you will be able to recover your data.



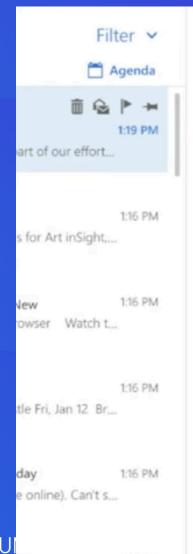
As recommended by the Microsoft Malware Protection Center (MMPC) in their "Backup the best defense against (Cri)locked files" blog post, you should back up your files on a regular basis by enabling System Restore, using manual syncing methods, or even by manually moving your files to a separate drive.

We recommend that your backups are kept in an external, non-mapped or not synced storage.



RANSOMCLOUD





Microsoft AntiSpam PRO



User receives email inviting them to try Microsoft branded SPAM filtering tool

Reply all

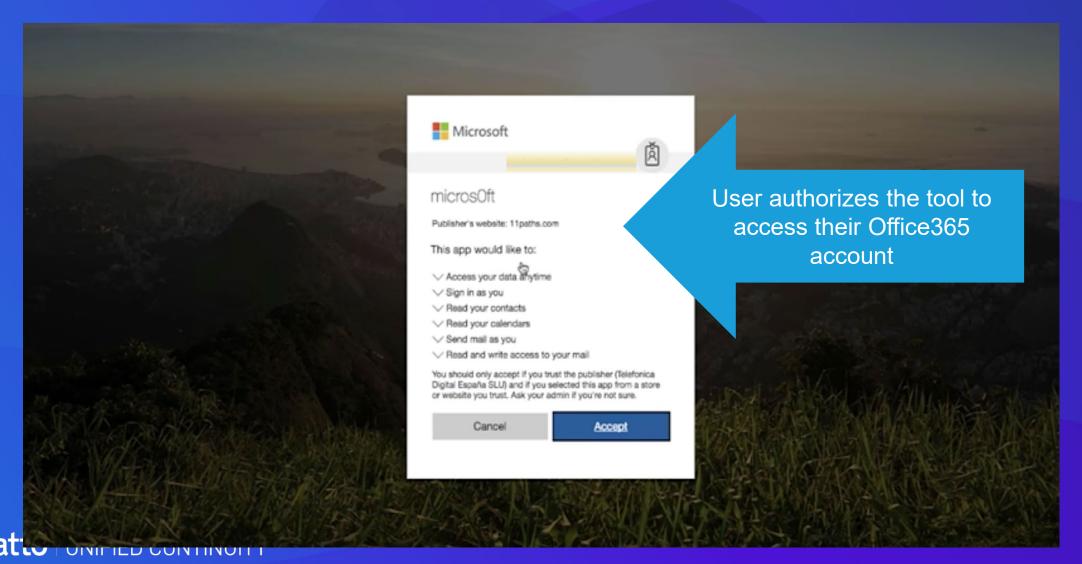
As part of our effort to improve your experience in all of our consumer services, we will update the Microsoft AntiSpam service. We would like to take this opportunity to inform you how to activate it.

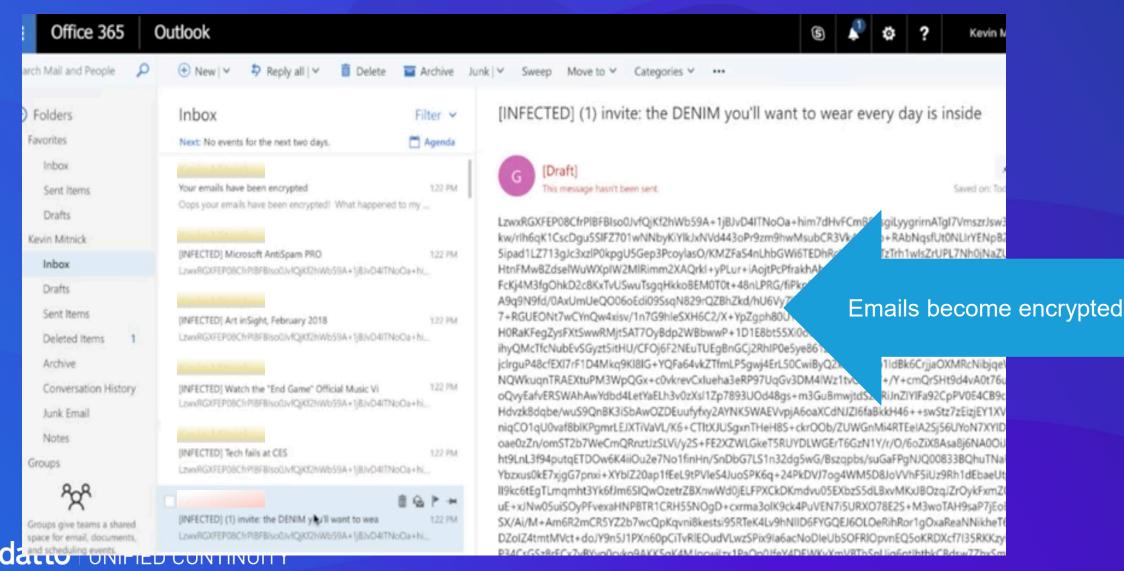


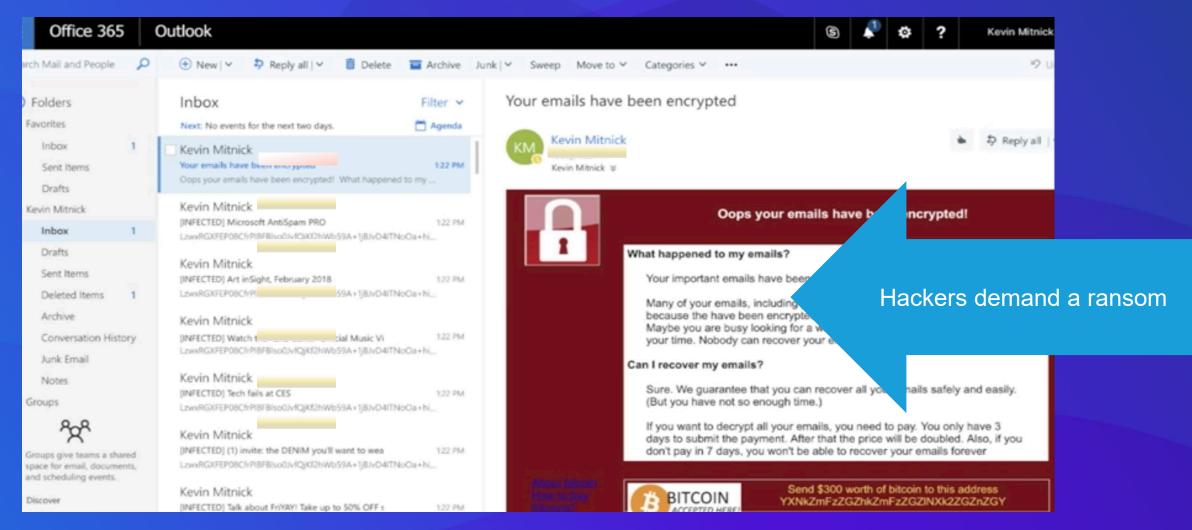
AntiSpam PRO – Our long-standing commitment to privacy has not changed. We remain committed to protecting your data, and being transparent on how we use your information and giving you control over your privacy. We have also launched a new AntiSpam service, which you must enable in the following link to enjoy all the advantages it offers. Thanks for using Microsoft services.

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1-1C DA







More data, more threats
Understanding the risk

Rethink backup!
Rethink DR!
Move to Continuity!

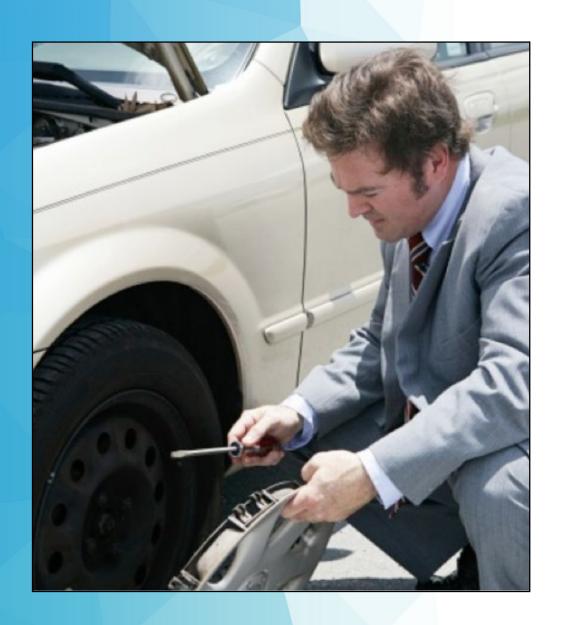
DR -> BC

"...At least one employee will click on anything."

It's not a matter of if...

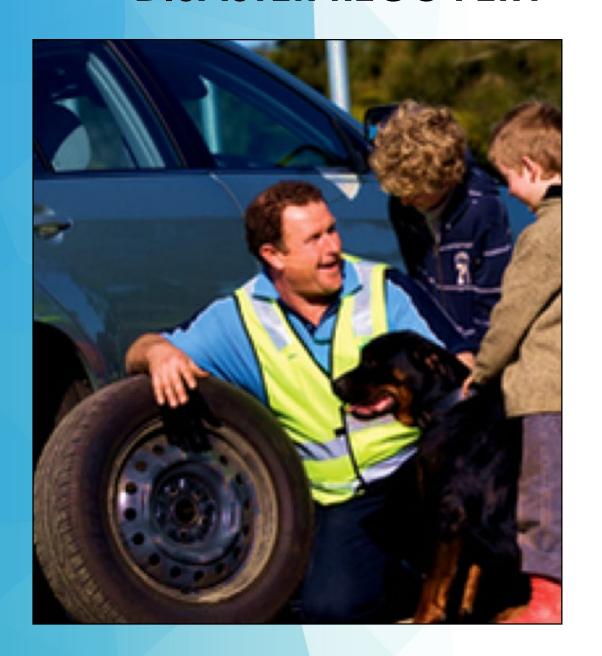
It's a matter of when..

BACKUP = SPARE TYRE



- Rusty Dusty Spare in the boot
- Is the spare still inflated?
- Is it good to use?
- No way to check if it is working before you need it
- Get out of car & get hands dirty
- Disruptive

DISASTER RECOVERY = RACT MEMBERSHIP



- Procedure in place
- Could take a while for RACT to arrive
- A lift to the mechanic
- You are going to be late (Downtime)
- Left waiting in the car
- Disruptive

BUSINESS CONTINUITY = RUN FLAT TYRES



- Run Flat tyres
- You do not have to stop
- Continue on your journey
- May need to slow down slightly
- Safe, and saves time
- Automatic notification if there is a problem
- Minimal disruption
- Gives you continuity

WHY BUSINESS CONTINUITY?

Backup Software

Disaster Recovery

Business Continuity

Copies/backup of your data

Disaster recovery (DR) focuses on the <u>policies</u>, <u>procedures</u> & technology to enable the recovery of I.T

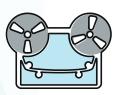
<u>Next evolution</u> of technology and is focused on <u>minimizing downtime</u>

Filing Cabinet

Tape Storage File Based Image Based/USB

Continuity



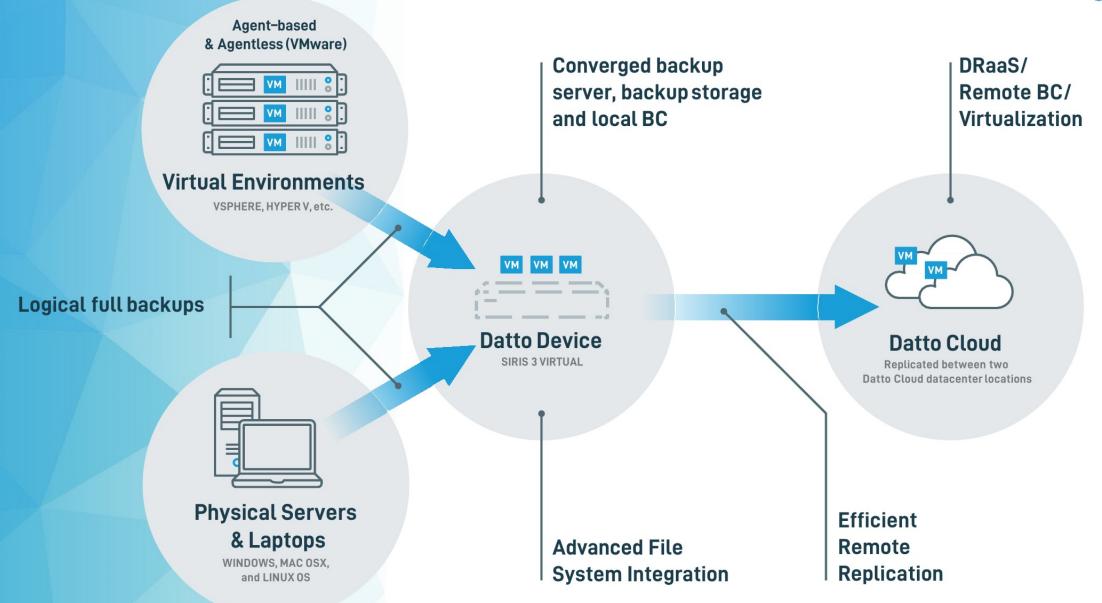




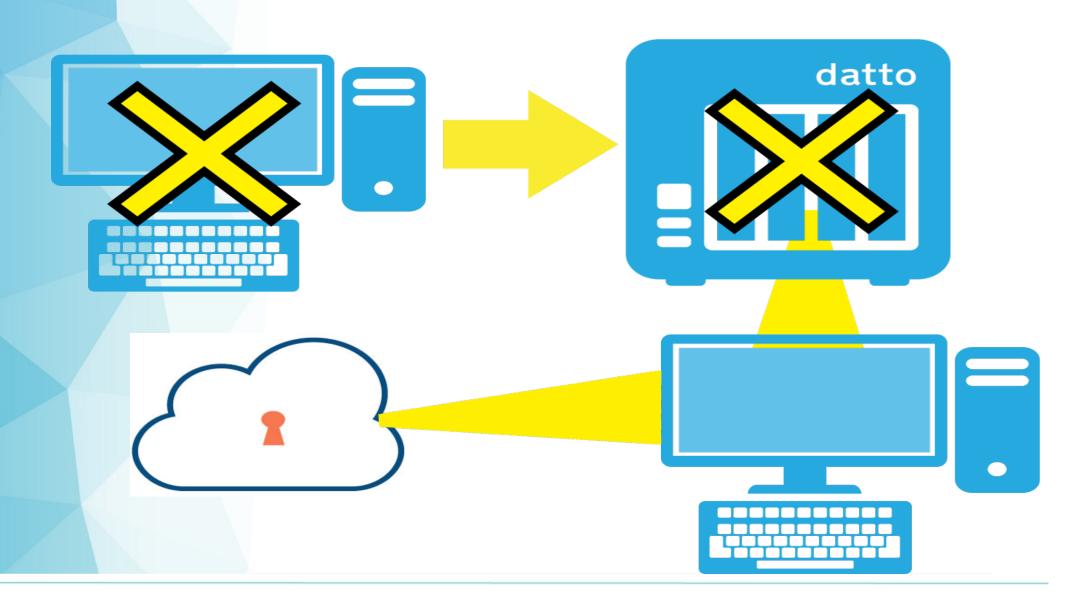




datto



Instant Virtualization – Local & Off-Site/Cloud



Thank you. Any questions?

Kultar Khatra

kkhatra@datto.com linkedin.com/in/kultarkhatra





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