

IT Security Awareness Talk By NUS IT

Feb 2018 @ LT 15



Outline

- 1. Information Security Objectives and Policies
- 2. Data Protection Measures
- 3. Trending Cyber-attacks Techniques and Best Practices



Information Security Objectives





What are the **Information Security Objectives?**

Preserve

Confidentiality

Integrity

<u>A</u>vailability



Accessible by authorized personnel.



Accurate and complete.



Accessible when required.

Of

Information

and

Information Systems

Source: IT Security Policy Chapter 1- Introduction to IT Security Policy, Section 2



Confidentiality Breach



HANNEL NEWSASIA 27 Jan 2017 11:41AM

2 companies fined S\$10,000 each for breaching data protection rules

JP Pepperdine Group and Propnex Realty were both imposed the financial penalty after failing to secure customers' personal information on their IT systems, thus making them available publicly.

According to the decisions listed on the PDPC website earlier this week, it received a complaint on Oct 25, 2015, against JP Pepperdine Group after it was discovered that anyone could access the personal data of members that joined its membership programme by not entering anything on the company's website's search bar and clicking search



Confidentiality Breach

PropNex fined \$10,000 for data breach

(PUBLISHED JAN 27, 2017, 5:00 AM SGT



Property agency inadvertently caused details of 1,765 people to be leaked online

Singapore's privacy watchdog has fined PropNex Realty \$10,000 after it inadvertently caused the personal data of 1,765 people to be leaked online. It is the second time the real estate industry has been in the news in the last three years over data privacy issues.

The Personal Data Protection Commission had fined an agent from Huttons Asia \$27,000 in 2014 for sending text messages to numbers listed on the Do Not Call registry, which is covered under the Personal Data Protection Act.

The commission started probing PropNex in December 2015 following a complaint from an unnamed woman that her name and mobile number were in an unsecured PDF document freely available online

PASSWORD PROTECTION

Immediately after notification, systems and procedures were enhanced... All such information is now protected with a password.

PROPNEX SPOKESMAN CAROLYN GOH, noting that the leak was unintentional.



Source: Straits Times @ 27 Jan 2017



Confidentiality Breach

THE STRAITSTIMES

143 NUS student volunteers' data breached; school directed to provide mandatory training APR 28. 2017, 2:55 PM

The commission found that a URL link for a Google Sheets spreadsheet, started by students from NUS College of Alice and Peter Tan, had disclosed personal data of students without authorisation.

The spreadsheet was created for the college's freshmen orientation camp in 2016, which was led by student leaders.

It contained the full names, mobile numbers, matriculation numbers, shirt sizes, dietary preferences, dates of birth, dormitory room numbers and email addresses of the student volunteers tasked to help run the camp.

It was found that an unknown party had changed the setting on the spreadsheet to "share using a link".

As a result, any user with the URL link will have access to the spreadsheet and the personal data in it, possibly exposing such information to those beyond the university, wrote PDPC deputy commissioner Yeong Zee Kin





Name one good practice that can prevent these incidents from happening

Answer:

Check the permission settings of website, functions, folders and files when storing and sharing data.



Integrity

TODAY

We set you thinking

Read the PDF print edition



S\$1.7m in Medisave grants paid mistakenly to babies to be recovered

ss | tech | sports | entertainment | lifestyle | blogs | photos | videos | print edition



CPF Board has "conducted a thorough review and enhanced the work processes involved", by having additional payment verification checks on all newborns who are eligible for the grants.

Source: Today @ Apr 2017



Availability

StarHub: Cyber attacks that caused broadband outages came from customers' infected machines



1 of 2 Disruptions on StarHub's broadband network on Saturday (Oct 22) and Monday (machines of the telco's own customers, ST PHOTO: ONG WEE JIN

SINGAPORE - The two waves of cyber attacks that brought down Internet surfing on StarHub's broadband network last Saturday (Oct 22) and on Monday (Oct 24) came from the bug-infected machines of the telco's own customers

Source: Straits Times @ 26 Oct 2016

Later on Wednesday, Singapore's Cyber Security Agency and the Infocomm Media Development Authority said that is the first time that Singapore has experienced such an attack on its telco infrastructure.





Name one good practice that can prevent these incidents from happening

Answer:

Change default password.

Verify data entered into system or data input from interfacing system.



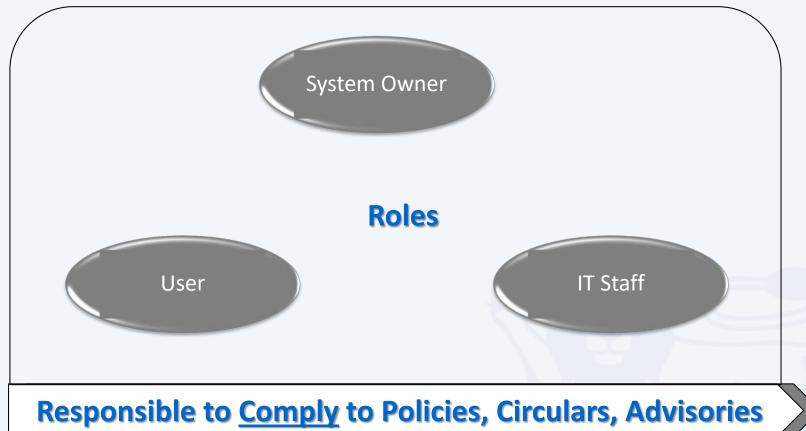
Information Security Policies



Think Good practice Implement Good practice Protect our Data and System



Roles and Responsibilities in Information Security



nesponsible to <u>comply</u> to Policies, circulars, Advisories



Overview of Information Security Policies

IT Security

Acceptable Use (for NUS IT resources)

Software Terms of use

Software Management

Mobile Device

Guideline for personal computer and equipment

Data Management

Guideline to classification and protection of University data

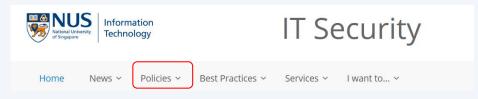
Cloud





Where can I find these Information Security policies?

Answer: ITS Portal @ https://nusit.nus.edu.sg/its





Applying Information Security Policies

Policy How does in		How does it	apply to me?
		Chapters /Clauses	Use Cases
1	IT Security	 Chp 4 - Access Control Security Chp 10 – System Development and Maintenance Chp 6 - Physical and Environmental Security 	 Review user accounts and access rights on Information System Request for Security Assessment User Lock screen when you walk away from your computer Report security incident to ccecert@nus.edu.sg immediately
2	Acceptable Use for IT resources	 Computer Misuse and Cybersecurity Act Spam Control Act Copyright Act 	 No sharing of account or password No spamming



Legislation Acts

http://statutes.agc.gov.sg/aol/search/display/view.w3p;ident=a0823194-a6f3-481d-898a-

7854557b85e7;page=0;query=CapAct%3A88%20Type%3Auact,areved;rec=1;resUrl=http%3A%2F%2Fstatutes.agc.gov.sg%2Faol%2Fsearch%2Fsummary %2Fresults.w3p%3Bquery%3DCapAct%253A88%2520Type%253Auact,areved#legis

Сар	Legislative Act	Brief Description
50A	Computer Misuse and Cybersecurity Act	Unauthorized access or modification of computer program/data
88	The Electronic Transaction Act	Preservation of the integrity and reliability of electronic record
311A	Spam Control Act https://www.ida.gov.sg/Policies-and-Regulations/Acts-and-Regulations/Spam-Control-Framework	Unsolicited communication in bulk either email or mobile
97	The Evidence (Computer Output) Regulations in Chapter 97 of the Evidence Act	Admissible evidence for court case (e.g. relevant facts not opinions)
2012	The Personal Data Protection Act https://www.pdpc.gov.sg/docs/default-source/publications-edu-materials/what-you-need-to-know-about-pdpa-v1-0.pdf?sfvrsn=4	Protection of personal data
63	Copyright Act	Protection of intellectual work
221	Patent Act	Protection of invention
332	Trademark Act	Protection of branding
338	Undesirable Publications Act	Prohibited publication that may be obscene, objectionable, etc





Can I share my user account and password?

Answer: No, you are liable for all actions performed using the account



ION Orchard fined S\$15,000 over customer data breach



In the incident, which took place on Dec 26, 2015, an unknown perpetrator used valid admin account credentials to log in to a server that held personal customer data.

It found that Orchard Turn Developments did not have any policy to prohibit the sharing of admin account credentials, or to enforce the periodic expiry and renewal of these. Instead, it had only one admin account, which was shared among four authorised users.

Source: CNA @ Jul 2017



Applying Information Security Policies

	Policy	How does	How does it apply to me?	
		Chapters /Clauses	Use Cases	
3	Software Terms of use	 Para 3 – Appropriate use of NUS Software 	 Install licensed Software on NUS computers for use only during course of employment with NUS 	
4	Software Management	• Para 3 (iii) - Policy	 Software used are appropriately licensed and inventoried 	
5	Guideline for personal computer and equipment	 Para 1.1 Qualified Corporate Mobile Devices 	 Use Qualified Corporate Devices https://staffportal.nus.edu.sg/st affportal/it/equipmenttender 	



Software Audit Circular dated 20th Oct 2016

1. Software License Records

Faculties and departments must keep an up-to-date software inventory register and documentary proof of software licenses purchased.

2. Use of Licensed Software in NUS-Owned Equipment

Faculties and departments are to ensure that only software with licenses purchased are installed in NUS-owned equipment. The actual installations must correspond with the licenses purchased. The <u>Software Inventory Reports</u> may be referenced to determine if additional licenses are required.

3. Acceptable Use of Shareware

Shareware is software that is freely available for download from the internet. In most cases, it is for non-commercial use only and Institutes of Higher Learning (IHLs) are excluded Faculty and staff must check the shareware owner's End User License Agreement (EULA) if use by IHLs is free or requires the paid version.

4. Anti-Malware Software

The University licenses TrendMicro OfficeScan as the standard anti-malware software to protect University computers, allowing proper centralized management of the virus definitions and updates. Computers found without TrendMicro Officescan or with an outdated version must have the software installed and updated immediately. Faculty or staff responsible for the computers may install the software from Software Center.

5. Use of Unauthorized Software

Faculty and staff must not use unauthorized software on NUS-owned equipment.



What is Unauthorized Software?

Example: Installing games on NUS laptop

The NUS Staff Handbook states that staff should not use University property for unauthorized personal use.

Aside from loss of productivity, there were also concerns over the legitimacy of the (i.e. pirated) software installed by staff on the University property.





Can I use Shareware?

Answer: Most shareware are free for home usage only. Read the terms and conditions to verify.



Applying Information Security Policies

SN	Policy	How does it apply to me?		
		Chapters /Clauses	Use Cases	
7	Data Management	 Chp 3- Data Classification Chp 4 – Data Administration (Data Collection, Sharing, Reporting Loss) 	 Classify the University Data handled (NUS Confidential, NUS Restricted, NUS Internal, Public) Report data loss or leakage cases immediately to cceda@nus.edu.sg 	
8	Guideline to classification and protection of University data	 Section D – Measures to protect University Data 	 Sure data on laptop (using EFS), external USB storage (using Bitlocker) and email (e.g. password protect personal data file sent via email) 	
9	Cloud Policy	 Para 5.5 – Self Subscribed cloud service (for public or NUS Internal) Para 6 – Enterprise Subscribed cloud service (NUS Confidential, NUS Restricted) 	 Subscribe to appropriate cloud services depending on the data classification and risk assessment (contact <u>NUS IT Cloud</u> <u>Policy@nus.edu.sg for cloud</u> <u>assessment</u>) 	



5. Self-Subscribed Cloud Service

5.1. This would include Cloud Services like DropBox, Facebook, Google Doc, Google Drive, Prezi and Piazza, etc. For corporate data, excluding teaching materials and research data, there shall be no Self-Subscribed Cloud Service involving NUS Confidential, NUS Restricted or personal data as the terms of Cloud Services agreement from Cloud Service Providers (CSPs) are often non-negotiable. User shall approach his/her department and consider Enterprise-Subscribed Cloud Service by conducting proper risk assessment and legal reviews. For corporate data that are classified as NUS Internal and meant for internal audience only, staff may consider Self-Subscribed Cloud Service but user access to Cloud shall be restricted and authenticated.





How do I know if I can use a cloud solution for conducting **NUS business?**

Answer:. Contact NUS IT Cloud Policy@nus.edu.sg for cloud assessment.



Who must comply to IT Security Policy?

Answer:

IT Security Policy Chap 1 Clause 3.4.1

3.4.1 Every staff, student and external party that has dealings with NUS information system resources is responsible for protecting and preserving the information in accordance with NUS IT Security Policy





Can I share IT Security Policy with my partners?

Answer:

IT Security Policy Chap 1 Clause 3.6.3

3.6.3 Where access is required by Supplier to University Data and IT Resources, Supplier is required to sign NDA and comply with AUP, IT Security Policy, Data Management Policy and Guideline on Use, Classification and Protection of University Data where applicable.



Security Advisory





NUS, NTU networks hit by 'sophisticated' cyber attacks

On Apr 11, NUS detected an unauthorised intrusion into its IT systems through a single server, while NTU detected a malware attack on Apr 19 possibly due to phishing or browsing of infected sites.

"However, as the universities' systems are separate from Government IT systems, the extent of the APTs' activities appear to be limited," said CSA and MOE. "The daily operations of both universities, including critical IT systems such as student admissions and examination databases, were not affected."

CSA, MOE and the universities said they would not be able to provide further details about the incident as it "could impact the effectiveness of additional defensive and preventive measures being put in place".



What is Advance Persistent Threat?

http://www.trendmicro.com.sg/sg/enterprise/challenges/advance-targeted-attacks/

Advanced persistent threats (APTs) are stealthier and more sophisticated than ever, using insidious social engineering techniques to quietly penetrate your organization to deploy customized malware that can live undetected for months. Then when you are least expecting it, cybercriminals can remotely and covertly steal your valuable information—from credit card data to the more lucrative intellectual property or government secrets—potentially destroying your competitive advantage, or in the case of government even putting national security at risk.



Advisory: NUS hit by Cyber Attacks

Dear Colleagues

We write to inform you that during a series of cyber security assessments of our IT system by external consultants, an unusual activity was detected and flagged to Computer Centre on 11th April.

Investigations promptly launched showed that a cyber attack had been made to penetrate NUS' IT system. This attack did not impact the daily operations of our IT systems or support, or affect student systems.

Immediate action was taken to isolate and remediate affected desktop computers and servers. The Cyber Security Agency is working closely with us in the ongoing investigations In parallel, we are also working with our cyber security consultants to further enhance the surveillance and defense of our systems.

The University takes cyber security matters and the integrity of its IT system very seriously. However, this incident highlights the rising sophistication of cyber security attacks, and the need for heightened vigilance.

Computer Centre will be putting in place additional measures to further safeguard our IT systems.

These include stepping up network and system monitoring, as well as enhancing security management.



Advisory: NUS hit by Cyber Attacks

CHANGING STAFF NUSNET PASSWORD(S)

For staff, please change your NUSNET password by <u>Friday, 19 May 2017</u>. Kindly note that the new required password length will be extended to 12 characters.

As part of our additional cyber security measures, staff NUSNET passwords which have not been changed by **Friday 19 May 2017**, will be expired. After this date, access to online university IT resources will be possible only if you have changed your password(s). You may change your password(s) at **exchange.nus.edu.sg** (please copy and paste the link to your browser).

If you need any assistance with changing your password(s), please call our 24-hour hotline at **+65 6601 6800**, which will run from 15 - 31 May 2017. You may also contact IT Care at itcare@nus.edu.sg.





What should my password length be?

Answer: Minimum of twelve (12) characters in length and be comprised of letters, numbers, and special characters

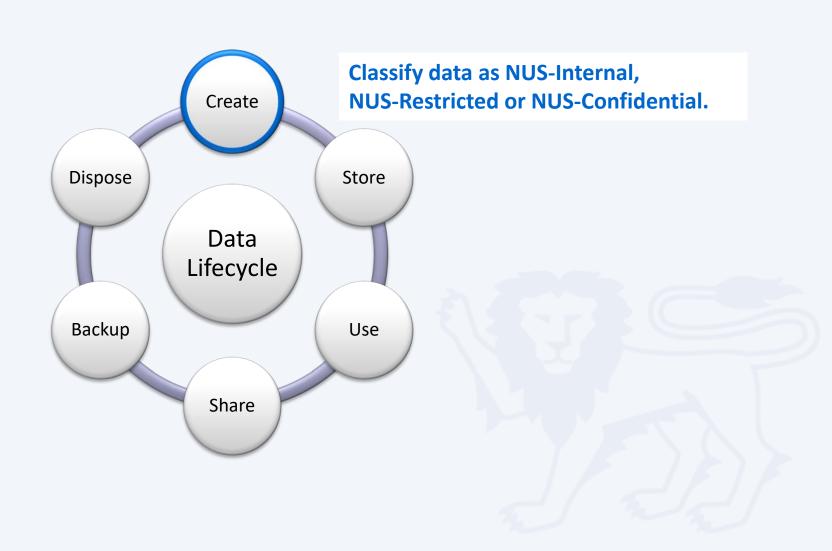


Data Protection Measures





Data Lifecycle & Data Protection Best Practices





NUS Confidential Data

NUS Confidential

Documents, information, or materials which are sensitive or critical, including proprietary information, for use within NUS by authorised personnel on a need-to-know basis. Release of NUS Confidential data may result in financial loss, potential litigation and severe damage to the reputation and interests of NUS, or the individual or entity to which the documents, information or materials relate.

Examples:-

- Staff salary
- Staff appraisal
- Examination marks/grades (including CAP and SAP) and examination questions
- Admission data (results, admission points, criminal records)
- Medical records (including medical and case history, diagnosis, case note, etc)
- Donor records
- Credit card/Bank account information (including bank account number, name of payee, amount, etc. excluding staff number)
- NRIC/FIN (including unique identification number such as Singapore NRIC, FIN, employment pass no., work permit no., student pass no., etc)
- Information relating to significant University initiatives or collaborations which are being negotiated



NUS Restricted Data

NUS Restricted

Documents, information, or materials other than those classified as NUS Confidential which are for use within NUS by authorised personnel on a need-to-know basis, including those which NUS has a contractual obligation to protect and all personal data as defined and classified in the DMP or any other applicable policy, procedure or guideline. Release of NUS Restricted data may involve damage to the reputation and interests of NUS, or the individual or entity to which the documents, information or materials relate.

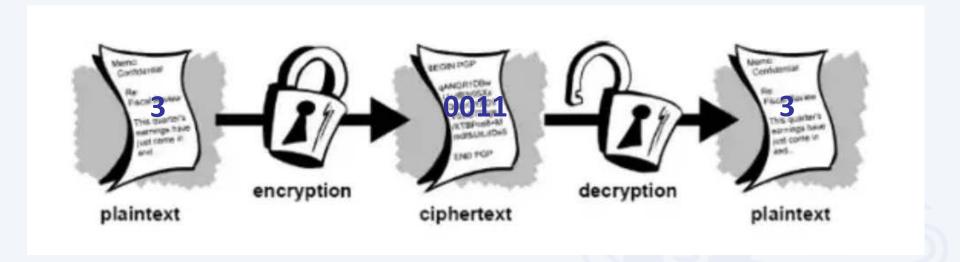
Examples:-

- Student, current and ex-staff and alumni records (e.g. alumni employment details, including aggregated, banded and/or de-identified salary information of alumni and graduates), research grant information and data, certain management information and reports, and information covered by confidentiality obligations.
 - **Personal Data**
 - a. Identification numbers (staff number, matriculation number)
 - b. **Personal contact information** (phone numbers, emails and addresses)
 - c. Financial information (credit card/bank account information)*
 - d. **Employment details** (including employer, designation, salary information of alumni and graduates, previous employment details of NUS staff)
 - e. Information on spouse, children and next-of kin



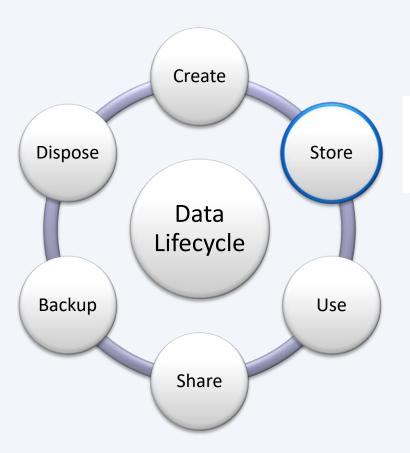
Data Encryption & Decryption

Source: https://www.quora.com/What-are-encryption-and-decryption





Data Lifecycle & Data Protection Best Practices

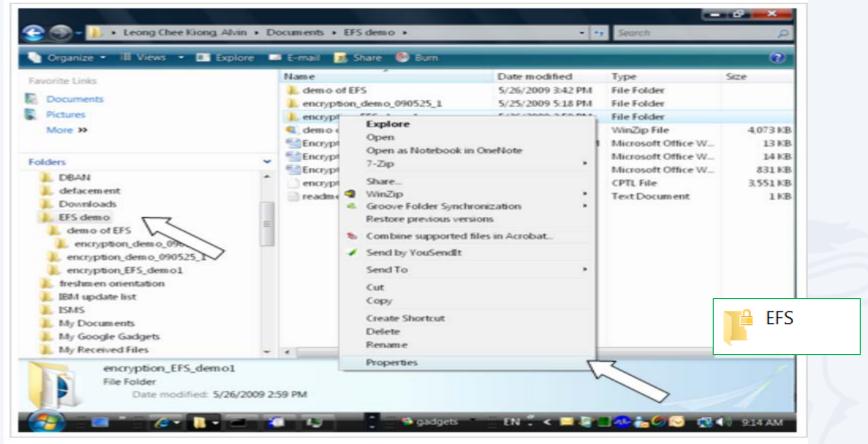


Encrypt NUS-Confidential data store on Laptop using Encrypting File System (EFS)



Encrypt Windows Folders (using EFS)

Right click on folder to encrypt. Select the option, "Properties".

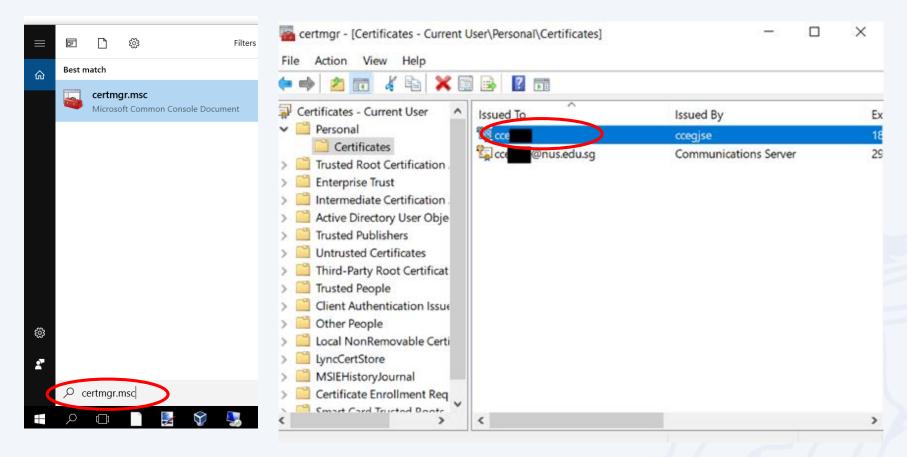


Picture: ZDNET

Note: EFS can encrypt the folders and files



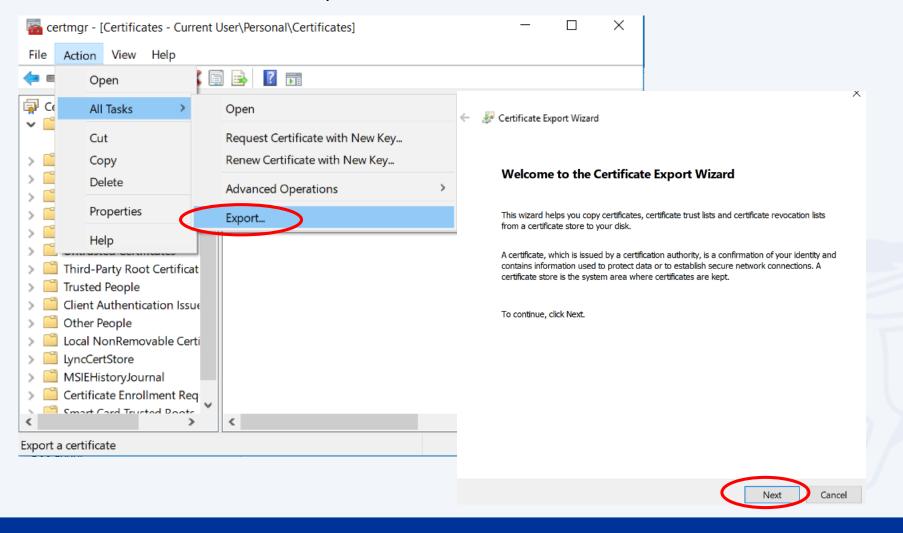
- Type certmgr.msc in the Search box and hit the ENTER key.
- Select Personal Folder and Click Certificates. Select userID.



Reference: https://nusit.nus.edu.sg/its/resources/landing/

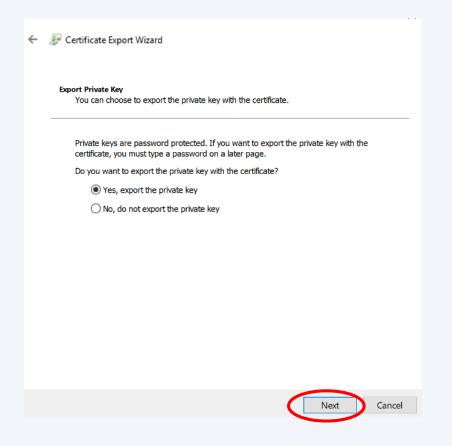


- Click Action -> All Tasks -> Export.
- Click Next on Certification Export Wizard





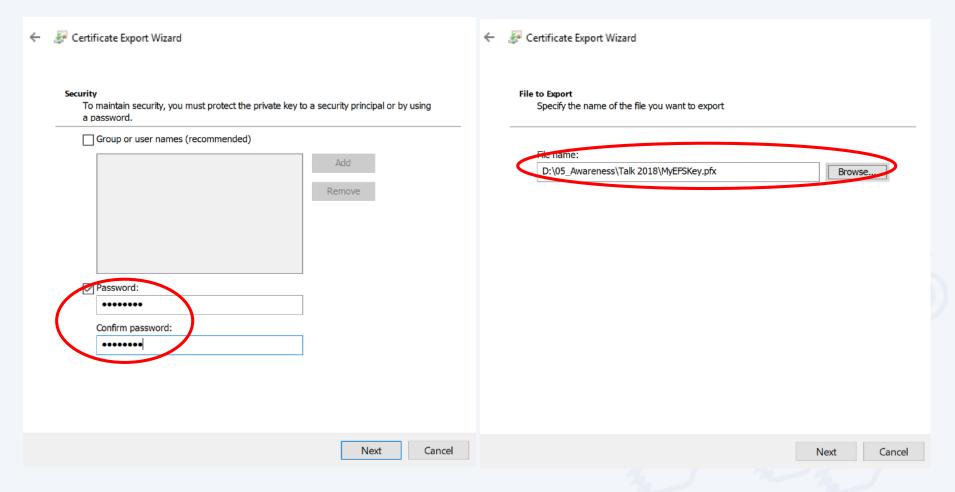
- Select "Yes, export the private key"
- Click Next on Certification Export Wizard



	le Format ficates can be exported in a variety of file formats.
Sele	ct the format you want to use:
	DER encoded binary X.509 (.CER)
	Base-64 encoded X.509 (.CER)
	Cryptographic Message Syntax Standard - PKCS #7 Certificates (.P7B)
	Include all certificates in the certification path if possible
(Personal Information Exchange - PKCS #12 (.PFX)
	☑ Include all certificates in the certification path if possible
	Delete the private key if the export is successful
	Export all extended properties
	☑ Enable certificate privacy
	Microsoft Serialized Certificate Store (.SST)

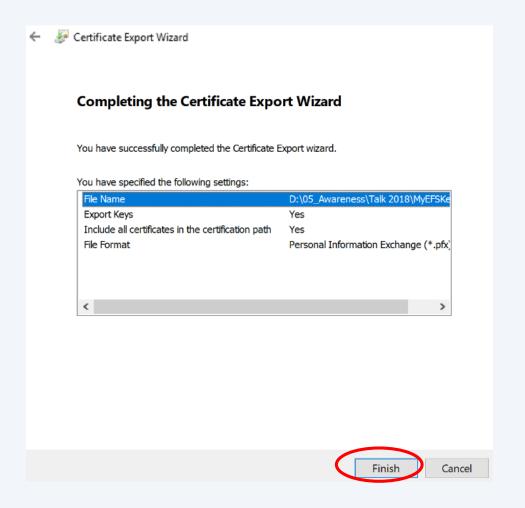


- Select Password option and Enter Password. Click Next on Certification Export Wizard.
- Click on Browse button, select the folder and enter filename for the EFS Key.



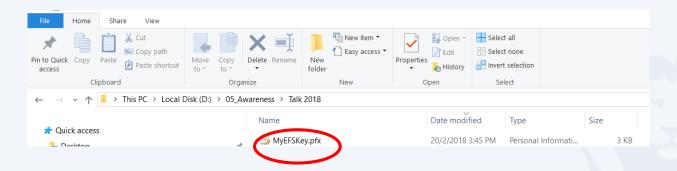


Click Finish on Certification Export Wizard.









Always copy EFS key to another device such as USB.





What happens if I lose my EFS key?

Answer: Data cannot be read or decrypted.



Sony's Data Leakage

First leaked data summary, some analysis courtesy of IdentityFinder:

- √ 26.4 GB in size, containing 33,880 files and 4,864 folders.
- ✓ Includes 47,426 unique Social Security Numbers (SSN)
- √ 15,232 SSN belonged to current or former Sony employees.
- 3,253 SSN appeared more than 100 times
- √ 18 files contained between 10,860 and 22,533 SSN each.

Get This: Sony Hack Reveals Company Stored Passwords in Folder Labeled 'Password'



Example of employee data found:

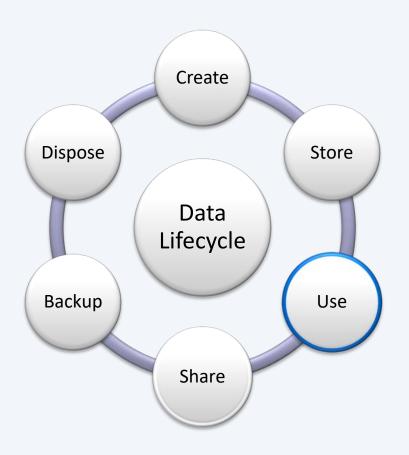
- One file (\HR\Benefits\Mayo Health\Mayo XEROX assessment feed) contains 402 full Social Security numbers, internal emails, plaintext passwords, and employee names
- ✓ An additional 3000 or more Social Security numbers, names, contact details, contact phone numbers, dates of birth, email addresses, employment benefits, workers compensation details, retirement and termination plans, employees previous work history, executive salaries, medical plans, dental plans, genders, employee IDs, sales reports, copies of passport information and receipts for travel, as well as money order details to purchase movie tickets to resell back to the Sony staff. The leaked information also included documents, payment, and account information to order custom jewelry from Tiffany & CO via email.

Source:

https://www.riskbasedsecurity.com/2014/12/a-breakdown-and-analysis-of-the-december-2014-sony-hack/https://www.entrepreneur.com/article/240517



Data Lifecycle & Data Protection Best Practices



Access data securely:

- Use VPN to access NUS system and data
- Use https website
- ...

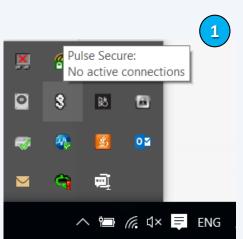


Use VPN to access

NUS System & Data off Campus

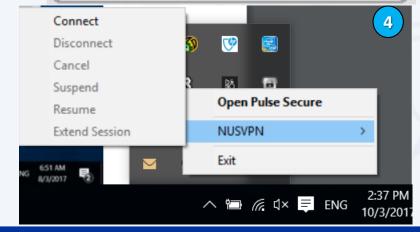














Use https website



Source: https://blog.easynews.com/http-vs-https-whats-the-difference/



What are the Data Protection Best Practices?



1

Use VPN to access NUS System and data off campus.

- Use https website for sensitive transactions (e.g. requires login)
- 3 Never remember password in browser.
- Log off from browser application after using it.
- 5 Keep work and personal email accounts separate.



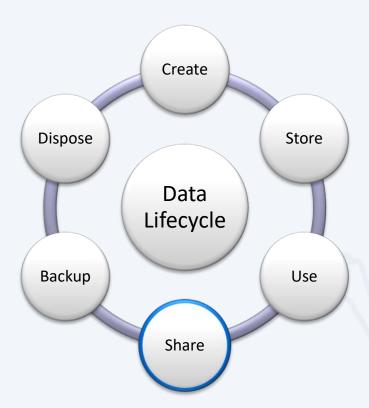


Should I use my NUS email address for registering with commercial site?

Answer: No, you might received unsolicited emails from mailing group or unknown sender when you use official email account for subscribing to commercial website (e.g. shopping).



Data Lifecycle & Data Protection Best Practices

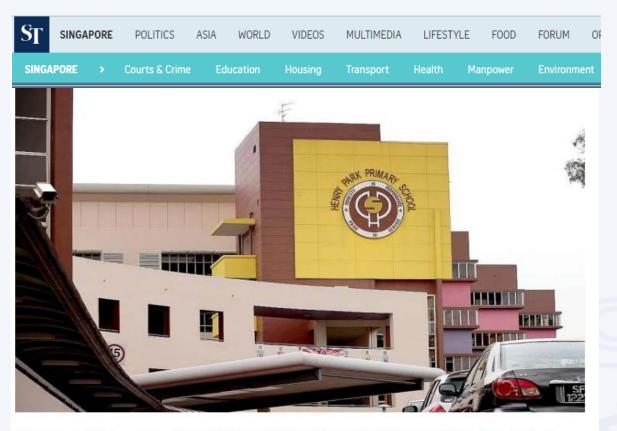


Password protect NUS-Confidential file sent over email.

• •



Sending Out Personal Data by Mistake



The personal data of more than 1,900 pupils from Henry Park Primary School was leaked when an Excel spreadsheet containing the children's particulars was mistakenly sent out to about 1,200 parents as part of an update about a school event. The file contained the names and birth certificate numbers of all 1,900 pupils in the school, and the names, telephone numbers and e-mail addresses of their parents.

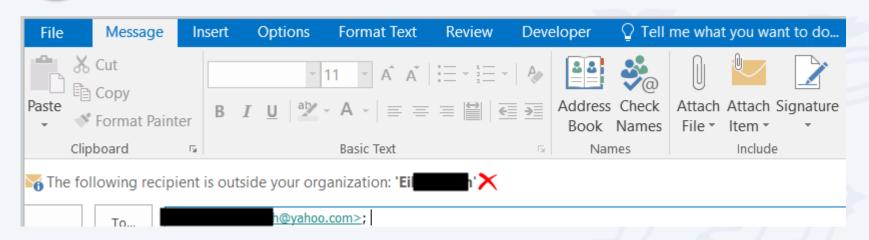
Source (Mar 1, 2017): http://www.straitstimes.com/singapore/take-steps-to-secure-online-accounts-experts-urge



What are the protection measures?

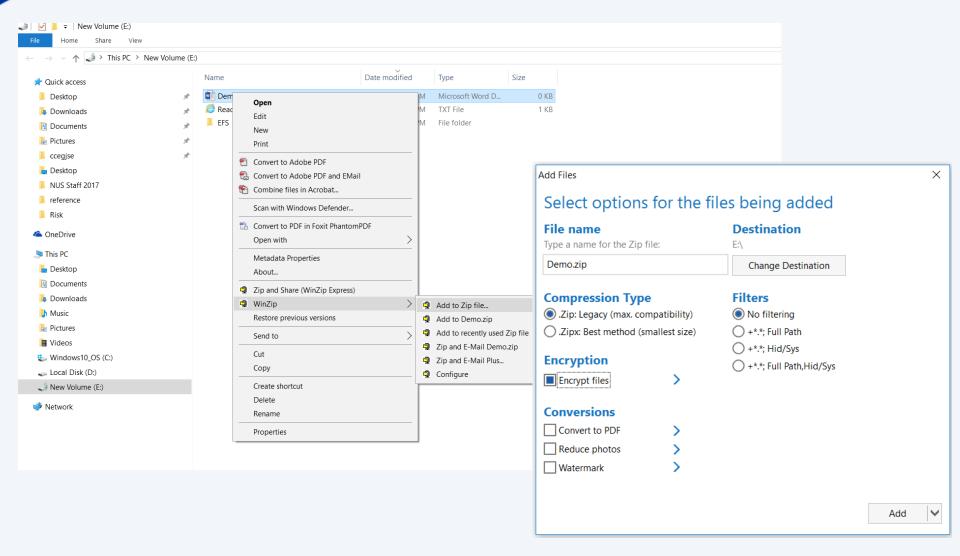


- Check that the recipient email address is correct
- 2 Encrypt the file with password using Winzip
- 3 Set delay email delivery





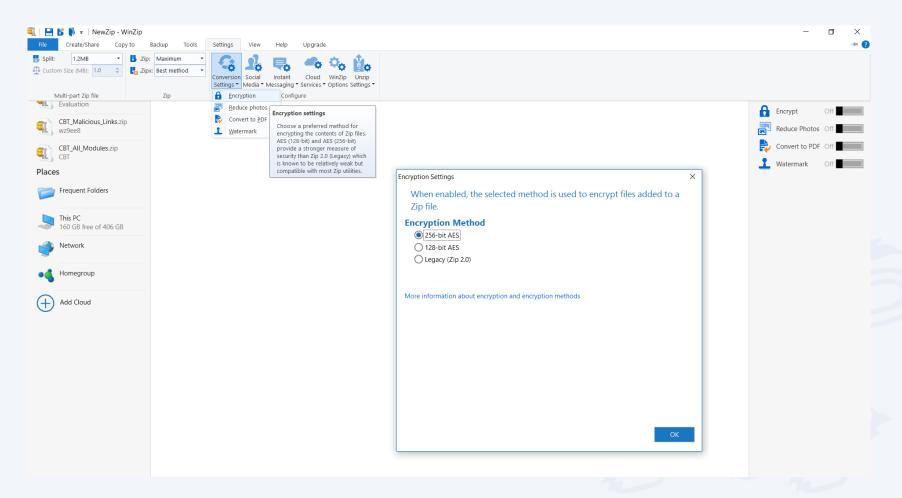
Encrypt Files with Password using Winzip





Encrypt Files with Password using Winzip

Configure your Winzip encryption settings to AES 256





Deferment of Email Delivery

From outlook client, go to File->Rules and Alerts->New Rule



Info

Open & Export

Save As

Save Attachments

Print

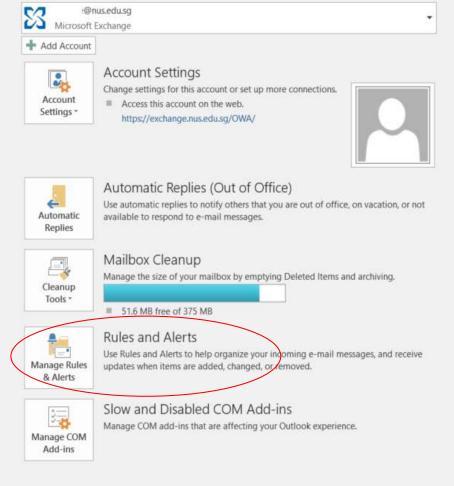
Enterprise Vault

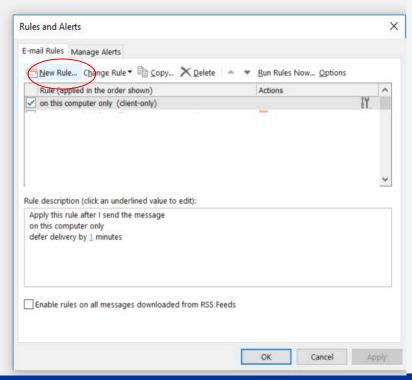
Office Account

Options

Exit

Account Information







Deferment of Email Delivery

Select the option, "Apply rule on message I send". Click the button, "Next"



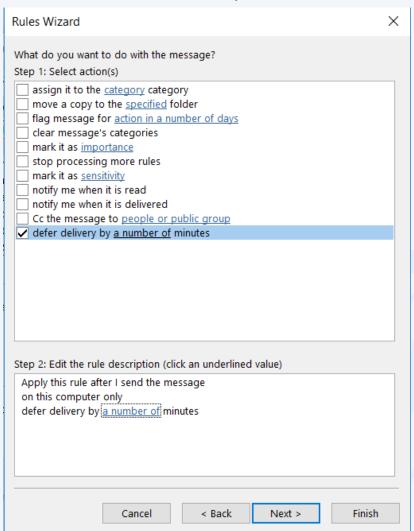
Select the option, "Apply on this computer only". Click the button, "Next"

Which condition(s) do you want to	check?		
Step 1: Select con	dition(s)			
through the s	pecified account			^
marked as im	<u>oortance</u>			
marked as ser	<u>nsitivity</u>			
sent to people	or public group			
with specific w	<u>rords</u> in the body			
_	<u>ords</u> in the subje	•		
=	<u>ords</u> in the recipi	ent's address		
	ategory category			
assigned to a				
which has an a				
	specific range			
uses the form				
	<u>properties</u> of doc		i	
	eting invitation or	•		
	ds with specified t	text in the title		
from any RSS				
of the specific				
on this compu	ter only			
Step 2: Edit the ru	•		value)	
	fter I send the me	essage		
on this compute	r only			



Deferment of Email Delivery

Select the option, "**Defer delivery by a number of minutes**". Click on the hyperlink, "a number of" and specify the number of minutes to delay. Click the button, "**Finish**"





Sharing out Confidential Data Unknowingly

What is Open Shares

This a user misconfiguration where shared folder permission is set to allow EVERYONE to have full access. It provides a very easy and effective way for attackers to browse and steal the (sensitive) data without any hacking tool or skill.

What should I DO

You should do a self-check on your computer to discover if there is any Open Shares or folder that has been shared unintentionally, and remove it immediately.

SECURITY ADVISORY

NUS COMPUTER CENTRE

Dear Colleagues,

Sometimes we share files and folders on our Windows PC with colleagues for work purpose. However, if the security permissions are not set correctly, the (sensitive) data being shared will be exposed and accessible to anyone, including unauthorized personnel. Stealing data via insecure shared folders can be easily done by someone who is moderately IT savvy.

We suggest that you perform a self-check on your PC to find and remove any insecure shared folders. Please click here-for-the-detailed-steps.

Computer Centre will also perform regular scans on all staff PCs to check for insecure shared folders. The relevant department management will be notified if insecure shared folders are identified.

Regards,

Wu Wenlong Head (IT Security)





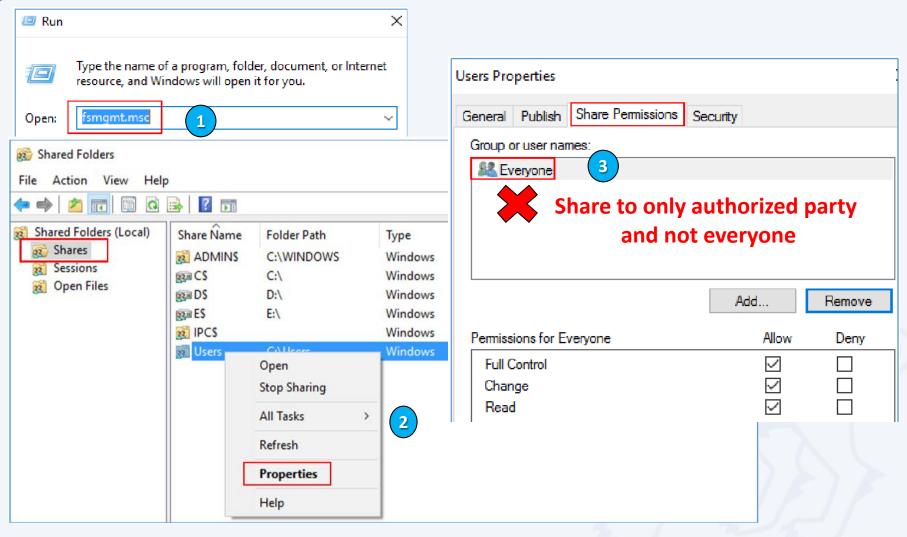


What is an Open Share folder?

Answer: Folder with full access right granted to everyone.



Remove Insecure Share Folders



https://comcen.nus.edu.sg/services/it_security/data-security/check-and-remove-insecure-shared-folders/





How can I share data with other colleagues?

Answer: Use Nbox, Sharepoint





Do I need to encrypt NUS data that are stored on portable storage?

Answer: Yes, use Bitlocker. Refer to Guideline for Use, Classification and Protection of Data, Section D, Table 2.



Enable Bit Locker

Source: https://nusit.nus.edu.sg/its/resources/bitlocker/install-bitlocker/

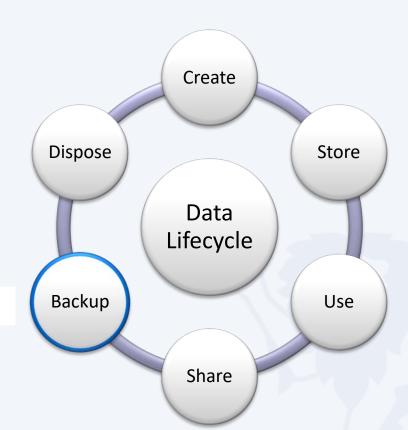
Window 10

- 1. Insert your thumbdrive into your computer.
- 2. Go to Computer and look for the drive letter assigned to your thumbdrive.
- 3. Right-click the drive and select Turn on BitLocker.





Data Lifecycle & Data Protection Best Practices



Backup data using Nbox



SERVICE LAUNCH NUS INFORMATION TECHNOLOGY

Dear Colleagues,

In today's world of Cloud services and data mobility, we expect our digital belongings to be available to us from anywhere. Cloud storage services such as Dropbox and Google Drive allows us to access and share our personal documents and media files from any device. But, how can we do the same for our University data?

NUS IT is pleased to introduce nBox - a storage solution that allows you to access, sync and share data easily and securely from any device.

Why nBox?

It is spacious

- · You get 1TB of personal storage space.
- You can upload files as large as 1TB to your personal storage space.

It is secure

- · You have full control on who can access your data.
- You can remotely delete your data from a lost or stolen device.

It is simple

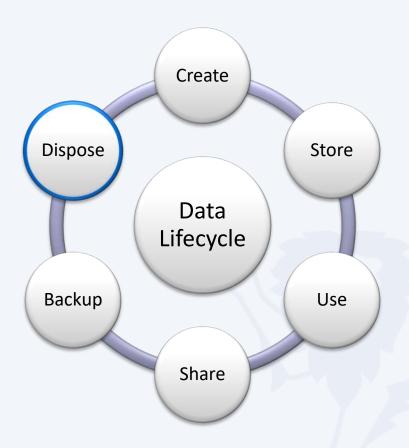
- nBox syncs your files and folders automatically across all your devices.
- nBox works just like your Windows or Mac folders.

Reference: https://nusit.nus.edu.sg/services/online_storage/nbox/



Data Lifecycle & Data Protection Best Practices

Dispose data securely using Blancco.





SERVICE LAUNCH NUS INFORMATION TECHNOLOGY

Dear Colleagues,

Did you know that it is mandatory to securely erase University data stored in storage media before disposal? In our continuous effort to enable the NUS Community to do that, NUS Information Technology has launched a new data wiping tool called Blancco Drive Eraser (Blancco). This will replace Darik's Boot and Nuke (DBAN).

The key feature of Blancco is the ability to securely erase Hard Disk Drives (HDD) and Solid State Drives (SSD). Blancco is licensed for use on NUS owned assets. Please visit our website "https://inetapps.nus.edu.sg/comcen/security/protect-data/secure-hard-disk-disposal-using-blancco.html" (please copy and paste the link) for more details and to download Blancco. Do note that connection to NUS network via LAN (Local Area Network) cable is required for Blancco to work.

Please contact IT Care at ITCare@nus.edu.sg or 6516 2080 for further queries.

Regards,

Tan Teng Heng

Senior Associate Director



This email has been digitally signed by the sender for authenticity. Simply click this icon on the top right hand corner to verify the sender. Kindly take note that this icon may not appear if this mail is forwarded.

Reference: https://inetapps.nus.edu.sg/comcen/security/protect-data/secure-hard-disk-disposal-using-blancco.html



Dispose Data Securely

Dumping paper with personal info? Shred it, says watchdog



A logo of the United Overseas Bank Limited seen in Singapore's central business district on January 7. PHOTO: REUTERS

Source: Straits Times 21 Jul 2016

Paper containing personal information must be shredded into small pieces and not dumped in unsecured bins.

Similarly, personal data stored on electronic media such as computer hard disks, USB drives or DVDs must be erased using specialised software to avoid accidental data leaks



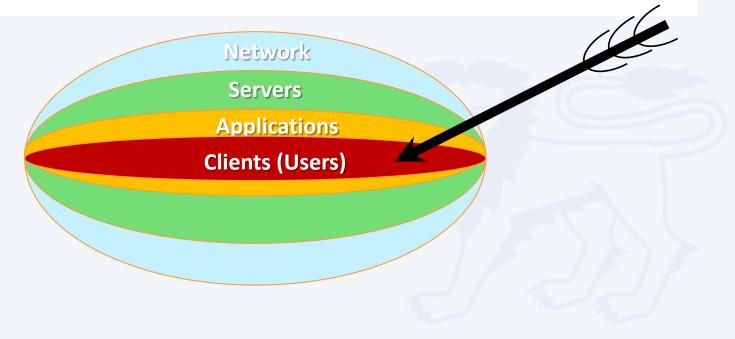


When and how do I report Data loss?

Answer: Report immediately your supervisor and to cceda@nus.edu.sg



Trending Cyber Attacks Techniques: Phishing, Digital Currency Mining & Ransomware





"91% of Cyberattacks begins with Phishing Email"

- TrendMicro



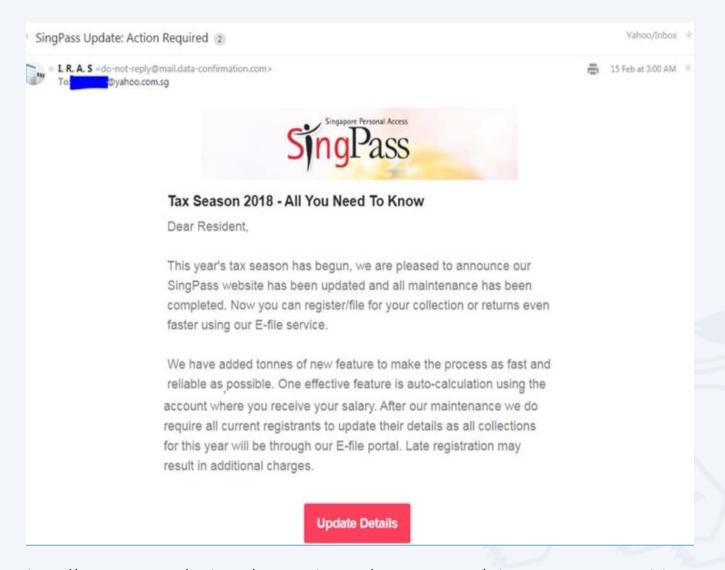
Phishers use email to:

- Trick you into handing over your user information so that they can gain access to your system and network.
- Entice you to click on links that take you to web sites that will infect your computer with malware just by visiting it.
- Deliver file attachments that can infect your computer with malware.





Phishing email with website link



Source: https://www.iras.gov.sg/irashome/News-and-Events/Announcements/Advisory-on-Scam---Fraudulent-Activities/



Phishing email with Attachment

Singtel warns of fake billing e-mail

Source: Straits Times

Source: Straits Times

Singtel advises recipients of suspicious e-mails "not to respond to or click on any links in the message" and to delete such e-mails immediately.

ST understands that there were e-mails sent on Monday and Tuesday from noreply-2@singtel.com.sg with the header "Your Sigtel (sic) bill is now available for download"

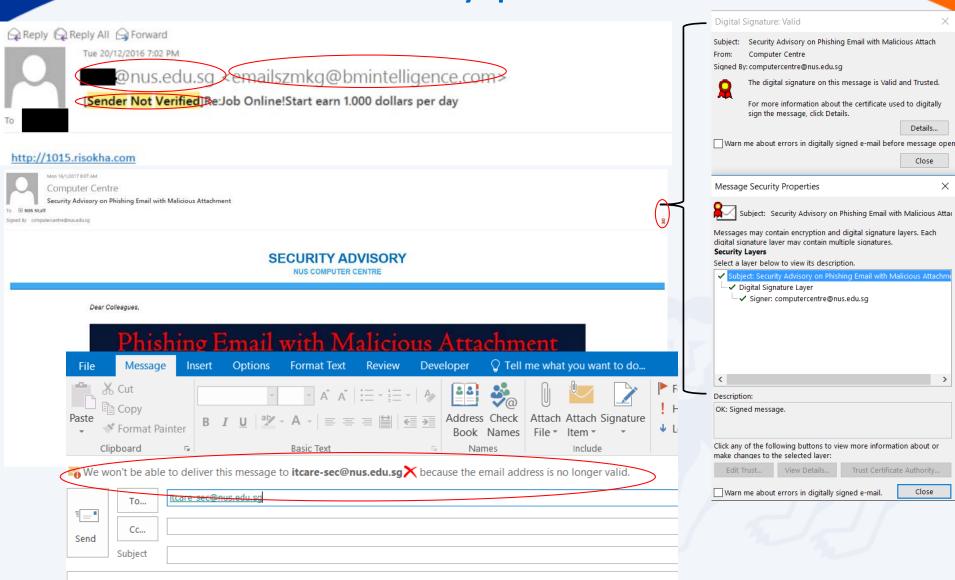




How to identify a spoofed email address?



How to identify spoofed account?





How to identify spoofed account?



- Look out for "Sender Not Verified" in the subject
- 2 Look out for digital signature
- Type the email address at the "to" field and click on check names





Can Phishing email be sent from legitimate account?

Answer:

Yes, the account could be compromised. Report any suspicious email using Phishing button.



How to spot a Phishing Email?



- Are you expecting the email? Is it the norm?
- Examine the email address. Is it valid email address?
- Examine the URL. Does it show NUS domain? i.e. nus.edu.sg

subdomain e.g. organization

directory

http://pages.example.com/archive/index.html

protocol

domain e.g. industry or country

filename

4

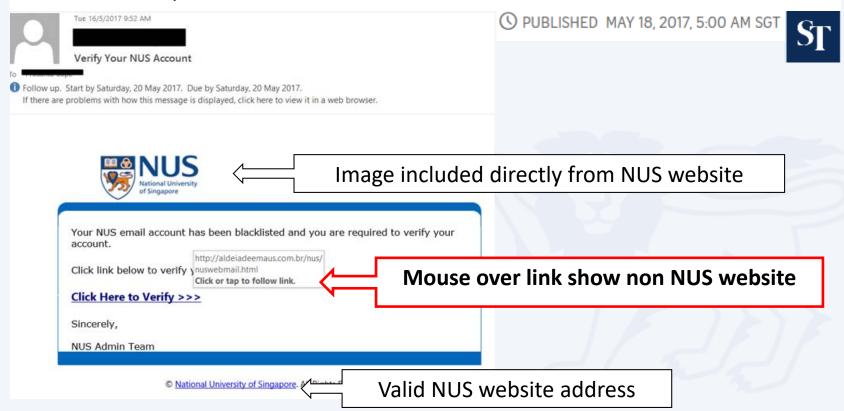
Copy and paste URL into edge browser.



Phishing Email from Legitimate Account

NUS staff hit by 'spear phishing' in new cyber attacks

....Spear phishing is the fraudulent practice of sending e-mail from trusted sender, to trick targeted individual to reveal information, click on malware infected link or attachment.





Is this a Phishing email?



From: IT Care [mailto:it_care@nus.edu.sg] Sent: Monday, 9 January 2017 9:13 AM

Subject: Your mailbox limit has exceeded

Importance: High

Dear Colleagues,

This is a gentle reminder to you from NUS Messaging Team Click or tap to follow link. have exceeded your mailbox limit. You are required to login to delete messages from your inbox, junk and deleted item folders. Failure to do so immediately will render your account deactivated.

Sincerely, **NUS Messaging Team** http://login.enterpriserewards.com.sg/ be3428/?

login id=0ff8ece9-c297-493d-a1c4-771fe 4868e96



Answer:



Thu 11/10/2016 2:49 PM

IT Care <IT_care@nus.edu.sq>

Your mailbox limit has exceeded

To

- 1 This message was sent with High importance.
- Mouse over the hyperlink. Does it show NUS domain? For example, https://exchange.nus.edu.sg/.

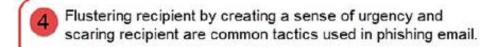
Examine if the Sender Address is valid. The correct email address for ITCARE should be ITCARE@nus.edu.sg and not IT-CARE@nus.edu.sg.

Forged login pages that looks like the real one are often used to steal user information in phishing email.

Dear Colleagues,

This is a gentle reminder to you firm NUS Messaging Team that you have exceeded your mailbox limit. You are required to <u>login</u> to delete messages from your inbox, junk and deleted item folders. Failure to do so immediately will render your account deactivated.

Sincerely, NUS Messaging Team





How to Spot a Fake Website?

http://www.straitstimes.com/singapore/staying-vigilant-how-to-spot-a-fake-website https://www.allsingaporestuff.com/article/cpf-board-beware-fake-cpf-website-do-not-log-it





Singapore Government Dearch Within CFT Website

1) Suspicious website address.

SINGAPORE

- 2) The address of the webpage where you submit information is unsecured meaning it does not start with "https://" and the lock symbol is missing from the status bar.
- 3) Asking for more information than required, such as credit card numbers and security code

WORLD





MULTIMEDIA

LIFESTYLE

FORUM OPINION

SPORT BUSINESS

d. We are expecting high traffic for our e-services and nauccesstur. More into >>

POLITICS

swebsite. We are correctly working to bring down this

Staying vigilant - how to spot a fake website ruse caurica when us no the internet, especially for







How to verify a malicious Website?

Answer:

Use online scanner to help determine if a website is malicious such as https://www.virustotal.com, or website that has been reported as Phishing site using https://www.phishtank.com/



https://www.virustotal.com/

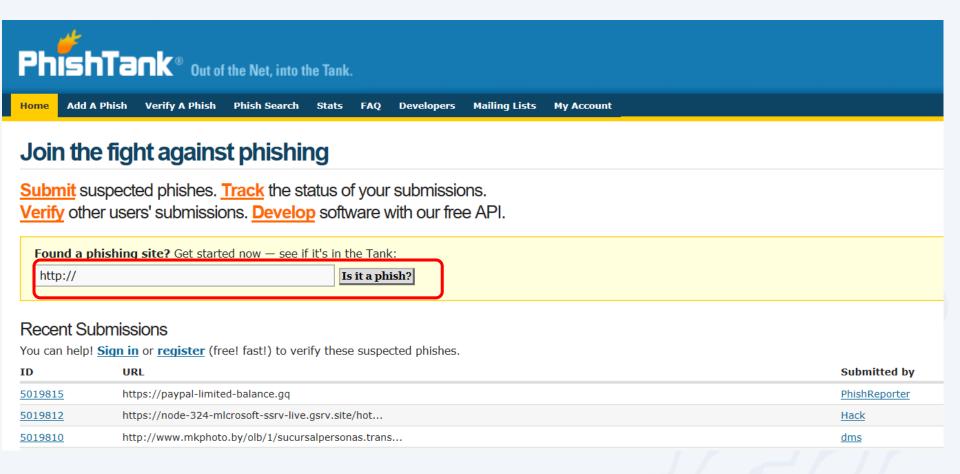
Zvirustotal

VirusTotal is a free service that **analyzes suspicious files and URLs** and facilitates the quick detection of viruses, worms, trojans, and all kinds of malware.

File	Q URL	Q Search		
	http://www.ex	ample.com/		Enter URL
			Scan it!	



https://www.phishtank.com/





https://safeweb.norton.com/



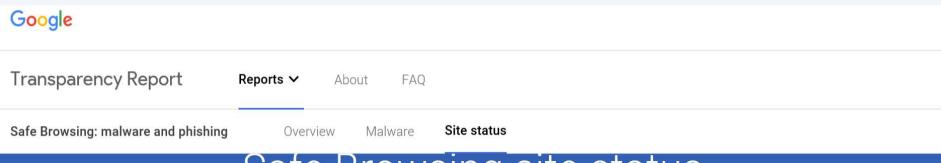
Look up a site. Get our rating.



enter site address



https://transparencyreport.google.com/safe-browsing/search



Safe Browsing site status

Google's Safe Browsing technology examines billions of URLs per day looking for unsafe websites. Every day, we discover thousands of new unsafe sites, many of which are legitimate websites that have been compromised. When we detect unsafe sites, we show warnings on Google Search and in web browsers. You can search to see whether a website is currently dangerous to visit.

Check site status

Search by URL

Q



Phishing via Email, SMS, whatsApp

Source: Straits Times 7 Sep 2017

AXA data breach affects 5,400 Singapore customers



The Singapore arm of AXA Insurance said that the personal data of 5,400 of its customers were stolen during a cyber attack. PHOTO: REUTERS

.. e-mail address, mobile number and date of birth were exposed

AXA made a police report, and advised customers to do the same if they had inadvertently disclosed personal data as a result of phishing attempts in the last few months as it could be connected to the AXA hacking incident

This method, known as phishing, can be executed via e-mail, SMS and WhatsApp - now that hackers have users' e-mail address and mobile number



Phishing via WhatsApp

NTUC FairPrice 45th anniversary gift card message is a

scam, supermarket chain warns

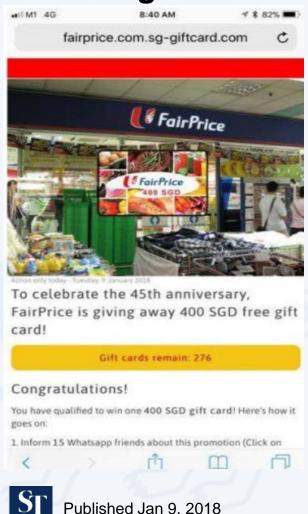
The new scam invites people to click on a link in a message claiming that FairPrice is giving away gift cards for its 45th anniversary.

A copy of the message that a Straits Times

reader received via WhatsApp reads:

"Fairprice celebrates its 45th anniversary and gives each gift cards worth 400SGD each! I have just received one from here: http:// fairprice. com /anniversary".

http://www.straitstimes.com/singapore/ntuc-fairprice-45th-anniversary-gift-card-message-is-a-scam-supermarket-chain-warns





Phishing via Phone Calls with modified Caller ID

Singapore Airlines warns of phishing scams offering free air

tickets

Beware of emails, calls, messages, surveys and contests that claim to be from Singapore Airlines (SIA) and which offer free air tickets or credits, said the flag carrier on Wednesday (Dec 20).



To appear more authentic, some scammers modify their caller ID to imitate SIA's official telephone numbers. ... The airline also advised customers to be on the alert for phishing websites that appear similar to the official SIA website, and to exercise caution in sharing their personal details online.

https://www.channelnewsasia.com/news/singapore/singapore-airlines-warns-of-phishing-scams-offering-free-air-9513474





Commonly Spoofed Sector, Brand and Organizations

Source: Straits Times 16 Sep 2017



2.512 phishing URLs with Singapore link

43%

of security incidents reported to SingCert by individuals and SMEs occurred through phishing attacks

Commonly spoofed

SECTOR



Commonly spoofed

BRANDS

PayPal Dropbox Google

Commonly spoofed

GOVERNMENT **ORGANISATIONS**

Ministry of Manpower Immigration & Checkpoints Authority

Source: CYBER SECURITY AGENCY OF SINGAPORE STRAITS TIMES GRAPHICS



What is the impact of Phishing?

http://www.straitstimes.com/singapore/380000-uber-users-hit-in-spores-largest-data-breach

380,000 Uber users hit in Singapore's largest data breach



Personal information of 380,000 people here, including names, e-mail addresses and mobile phone numbers, were exposed when Uber was hacked last year, the ride-sharing company disclosed yesterday - owning up to what is Singapore's largest data breach to date.

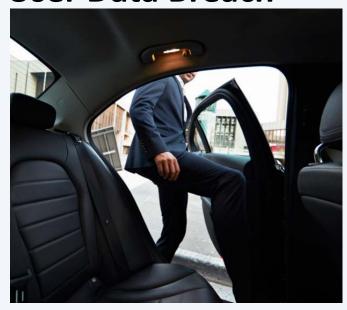
...the company has not seen evidence of fraud or misuse tied to the incident. But it did encourage users to report anything unusual related to their accounts.



What is the impact of Phishing?

https://www.wired.com/story/uber-paid-off-hackers-to-hide-a-57-million-user-data-breach/

Hack Brief: Uber Paid Off Hackers to Hide a 57-Million User Data Breach



According to Bloomberg, Uber's 2016 breach occurred when hackers discovered that the company's developers had published code that included their usernames and passwords on a private account of the software repository Github.

Those credentials gave the hackers immediate access to the developers' privileged accounts on Uber's network, and with it, access to sensitive Uber servers hosted on Amazon's servers, including the rider and driver data they stole.



Think Before You Click







Mon 9/1/2017 8:17 AM

Phishing Reporter Button

Computer Centre

[New Service] Report Phishing with click of a button

To NUS Staff

Signed By computercentre@nus.edu.sg

SERVICE LAUNCH

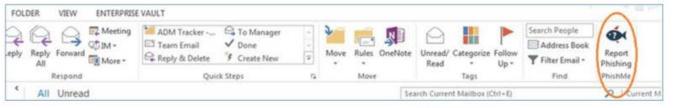
NUS COMPUTER CENTRE

Dear Colleagues,

Organizations suffer from data breaches when attackers gain unauthorised access to an organization's computers and network through phishing emails. To mitigate the risk from such threats, Computer Centre has made a concerted effort to increase security awareness and conduct regular phishing drills. From 9 Jan 2017, we will be rolling out a "Phishing Reporter" button progressively to all Outlook client of computers on NUS network. This will allow you to report Phishing or suspicious email conveniently.

For Windows Computer Users

From 9 Jan 2017, you may see the "Phishing Reporter" button installed on your Microsoft Outlook when you reopen it. No action is required on your part.



However, if you did not see the "Phishing Reporter" button after 19 Jan 2017, please install it via Software Centre

For MAC Users

Follow the instructions here to install the "Phishing Reporter" button.

How do I report Phishing or Suspicious Email?

Select the Phishing or suspicious email in the Outlook client and click on the "Phishing Reporter" button.

What happens after I clicked the "Phishing Reporter" button?

The reported email will be removed from your "Inbox" folder and forwarded to Computer Centre for investigation. A copy will remain in your "Sent Items" folder.

The information you provided will help to determine the source of attacks and prevent similar attacks on NUS.

If you have any query, please contact IT Care at 6516 2080 or ITCare@nus.edu.sg.





How do I report Suspicious or Phishing Email?

Answer:

Report suspicious email using Phishing Reporter Button Email to ITCARE@nus.edu.sg



or





How do I know if my account is being stolen?

Answer: Check out haveibeenpwned.com or pastebin.com



https://haveibeenpwned.com/

';--have i been pwned?

Check if you have an account that has been compromised in a data breach

email address or username

pwned?

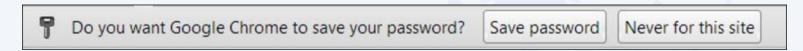
You can try key your email account over here



Best Practices: Account & Password



- Use strong password: minimum of twelve (12) characters in length and be comprised of letters, numbers, and/or special characters.
- ² Change password periodically.
- Use different account and password for social media and work.
- Don't remember password in web browser.





Malware is Growing Fast

http://www.darkreading.com/vulnerabilities---threats/every-4-seconds-new-malware-is-born/d/d-id/1320474

http://nvlpubs.nist.gov/nistpubs/ir/2013/NIST.IR.7298r2.pdf

http://www.iso27001security.com/html/27032.html



VULNERABILITIES / THREATS

Born

5/18/2015 06:30 PM



New report shows rate of new malware strains discovered increased by 77 percent in 2014.

Every 4 Seconds New Malware Is

New research data out today shows that the rate of new malware variants

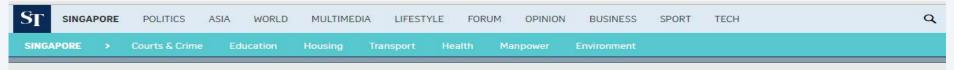


Crieka



Rise in Ransomware

http://www.straitstimes.com/singapore/noticecable-rise-in-ransomware-infections-in-singapore-singcert/ https://www.csa.gov.sg/singcert/news/advisories-alerts/ransomware



Noticeable rise in ransomware infections in Singapore: SingCert

O PUBLISHED MAY 6, 2016, 7:59 PM SGT







Ransomware

Source: Symantec @ Aug 2015

There are two main forms of ransomware in circulation today:

- Locker ransomware (computer locker):
 Denies access to the computer or device
- Crypto ransomware (data locker): Prevents access to files or data.
 Crypto ransomware doesn't necessarily have to use encryption to stop users from accessing their data, but the vast majority of it does.

Both types of ransomware are aimed squarely at our digital lifestyle. They are designed to deny us access to something we want or need and offer to return what is rightfully ours on payment of a ransom. Despite having similar objectives, the approaches taken by each type of ransomware are quite different.

LOCKER RANSOMWARE CRYPTO RANSOMWARE FIRST FEDERAL BUREAU OF INVESTIGATION Your computer has been locked! Your personal files are encrypted! ibligated to pay a release fee of \$200. Payable through GreenDo signated payment field and press the "Submit" button. ou have been violating Copyright and related Rights Law (Video, Music Software) and flegally using or distributing content, thus infraing Article I, Section II, Clause II also know as the Copyright of the Oriminal Code of United ates Of America Article I, Section 6, Clause 8 of the Criminal Code pro-All activity of this com a fine of two to five hundred minimal wages or a deprivation of liberty for two You have been viewing or distributing prohibited For ld porno/Zoofilia and etc). Thus violating article 202 of the O of Linked States Of America ursuant to the amendment to the Griminal Gode of U.SA of May 20. 71:03:09 **LOCKS SYSTEM SOCIAL ENGINEERING ENCRYPTS FILES VOUCHER PAYMENT FAVORS TOR** US\$200 "FINE" **BITCOIN PAYMENT** US\$300 "FEE"

Figure 1. Two main types of ransomware are locker ransomware and crypto ransomware



Tiong Bahru Plaza's digital directory hit by global ransomware attack: Mall operator A CHANNEL NEWSASIA Wannacry 14 May 2017 06:01 (Updated: 15 May



She added that the digital directory service is provided to the mall by a third-party vendor, and that the vendor's system has been disconnected from the board while a software patch is

being installed. "We have fixed all the affected systems by

replacing the HDD with a new master image with all latest MS patches, disabled SMB access

and hardened the system by using a higher security mode of operation," Mr Soh said.



WannaCry Ransomware

WannaCry ransomware: Critical sectors not affected at end of Monday



ST

PUBLISHED MAY 15, 2017, 6:49 PM SGT

Victims either did not apply a software patch, released in March (2017), to fix a known flaw in their Microsoft Windows systems, or were using old, unsupported systems such as Windows XP or Windows Server 2003.

Users might have initially been infected by clicking on a bogus link or attachment in the e-mail. Then the worm spreads to multiple machines over the intranet or Internet using a capability believed to have been developed by the United States National Security Agency - causing the attack to be unprecedented in scale by any ransomware



Advisory: WannaCry



Mon 15/5/2017 2:25 PM

Computer Centre

[Security Advisory] Widespread "WannaCry" Ransomware targeting unpatched Windows Systems

NUS Staff

Signed By computercentre@nus.edu.sg



Dear Colleagues,

As you know, there is a worldwide infection with a ransomware known as "WannaCry" aka "WanaCryptOr" discovered on 12th May 2017 that can infect any unpatched Windows device connected to the same network.

This ransomware can be blocked by a patch released by Microsoft in March 2017. Computer Centre deployed this patch within NUS in the same month as part our regular patch exercise. Since Friday, 12th May 2017, Computer Centre has taken additional measures to detect and block the intrusion and spread of this ransomware.

However, given the ease with which this ransomware infection can spread, it is very important that you double-check your desktop computer or laptop as soon as possible to confirm that your Windows software is up to date, using the following steps. If there are updates available, please install them.

For Windows 7 – Go to Control Panel -> Windows Update -> Check for available updates

For Windows 8 – Go to Settings -> Change PC Settings -> Windows Update

For Windows 10 – Go to Settings -> Update & Security -> Windows Update



Latest Global Ransomware - Petya

https://krebsonsecurity.com/2017/06/petya-ransomware-outbreak-goes-global/

27 'Petya' Ransomware Outbreak Goes Global

JUN 17

A new strain of ransomware dubbed "**Petya**" is worming its way around the world with alarming speed. The malware is spreading using a vulnerability in **Microsoft Windows** that the software giant patched in March 2017 — the same bug that was exploited by the recent and prolific WannaCry ransomware strain.

Doops, your important files are encrypted.

If you see this text, then your files are no longer accessible, because they have been encrypted. Perhaps you are busy looking for a way to recover your files, but don't waste your time. Nobody can recover your files without our decryption service.

We guarantee that you can recover all your files safely and easily. All you need to do is submit the payment and purchase the decryption key.

Please follow the instructions:

Send \$300 worth of Bitcoin to following address:

1Mz7153HMuxXTuR2R1t78mGSdzaAtNbBWX

2. Send your Bitcoin wallet ID and personal installation key to e-mail wowsmith123456@posteo.net. Your personal installation key:

74fZ96-2Nx1Gm-yHQRWr-S8gaN6-8Bs1td-U2DKui-ZZpKJE-kE6sSN-o8tizV-gUeUMa

If you already purchased your key, please enter it below. Key: _



Impact of Ransomware - Petya

http://www.bbc.com/news/technology-40416611



Global ransomware attack causes turmoil

The virus, the source of which is not yet known, freezes the user's computer until a ransom in untraceable Bitcoin is paid.

Ukrainian firms, including the state power company and Kiev's main airport, were among the first to report issues.

The Chernobyl nuclear power plant has also had to monitor radiation levels manually after its Windows-based sensors were shut down.

In a statement, the US National Security Council said government agencies were investigating the attack and that the US was "determined to hold those responsible accountable".

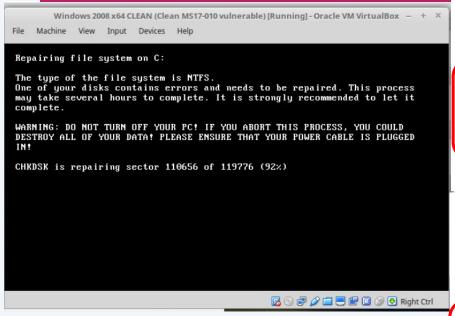


Petya Ransomware

theguardian Wednesday 28 June 2017

What is the Petya ransomware attack, and how can it be stopped?

Companies have been crippled by an attack dubbed 'Petya', the second major ransomware crime in two months. **Olivia Solon** answers the key questions



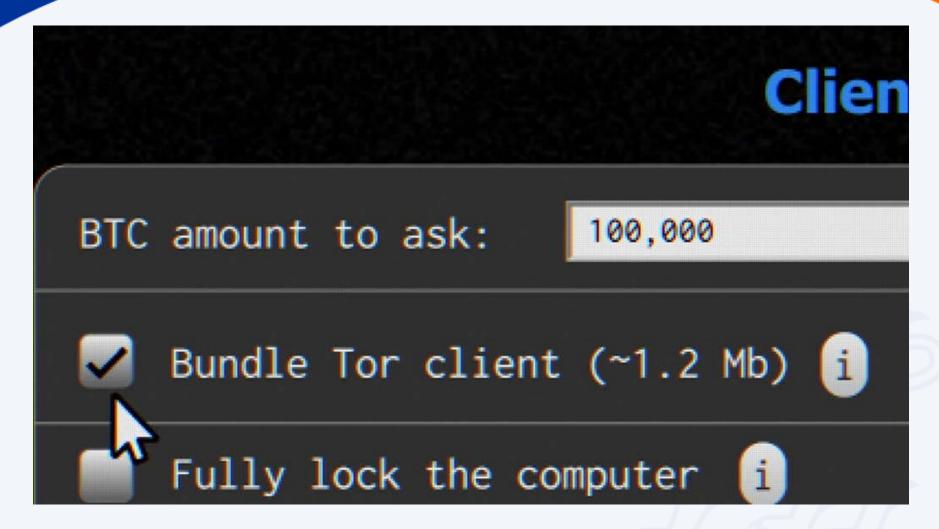
The ransomware infects computers and then waits for about an hour before rebooting the machine. While the machine is rebooting, you can switch the computer off to prevent the files from being encrypted and try and rescue the files from the machine, as flagged by

@HackerFantastic on Twitter.

If the system reboots with the ransom note, don't pay the ransom – the "customer service" email address has been shut down so there's no way to get the decryption key to unlock your files anyway. Disconnect your PC from the internet, reformat the hard drive and reinstall your files from a backup. Back up your files regularly and keep your anti-virus software up to date.



Video: Ransomware



Source: ttps://www.youtube.com/watch?v=4gR562GW7TI&list=PLSJO6rbiqUDVe_I7QvGdrJnjOmaTqZfUR&index=20





What should I do if my machine is infected with ransomware?



What should I do if my machines are infected?



- Disconnect the machines from network
- 2 Disconnect any storage devices from the machines
- Report to your supervisor
- 4 Report to ITCARE





Should I pay the ransom?

Answer: No, there is no guarantee that your files will be recovered.



Ransomware File Decryptor

Reference:

https://success.trendmicro.com/solution/1114221-downloading-and-using-the-trend-micro-ransomware-file-decryptor https://id-ransomware.malwarehunterteam.com/



Business Support

Technical Support ▼

Virus & Threat Help

Renewals & Registration

Contact Support

Downloading and Using the Trend Micro Ransomware File Decryptor

② Updated: 29 Dec 2016

Product/Version: Antivirus+ Security 2016.All,

Platform: Windows 10 32-bit.

SUMMARY

This guide provides the instructions and location for downloading and using the latest Trend Micro Ransomware File Decryptor tool to attempt to decrypt files encrypted by certain ransomware families.

As an important reminder, the best protection against ransomware is preventing it from ever reaching your system. While Trend Micro is constantly working to update our tools, ransomware writers are also constantly changing their methods and tactics, which can make previous versions of tools such as this one obsolete over time.

Customers are strongly encouraged to continue practicing safe security habits:

- 1. Make sure you have regular offline or cloud backups of your most important and critical data.
- 2. Ensure that you are always applying the latest critical updates and patches to your system OS and other key software (e.g. browsers).
- 3. Install the latest versions of and apply best practice configurations of security solutions such as Trend Micro to provide mutli-layered security.



Ransomware File Decryptor



IMPORTANT! Before downloading and starting the solution, read the how-to guide. Make sure you remove the malware from your system first, otherwise it will repeatedly lock your system or encrypt files. Any reliable antivirus solution can do this for you.

Source: https://www.nomoreransom.org/en/decryption-tools.html

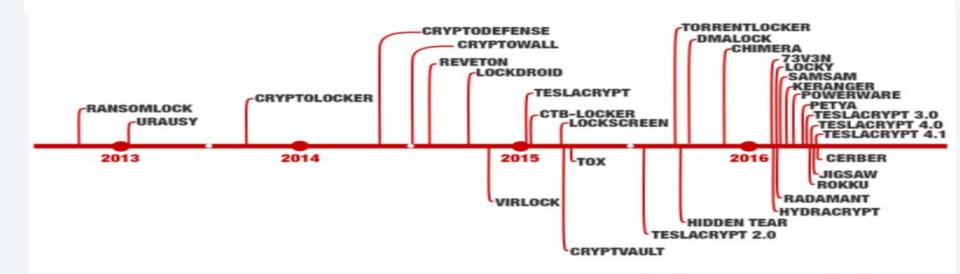


Some Ransomware can Traverse across Network

Source: https://www.csa.gov.sg/singcert/news/advisories-alerts/ransomware

What is Ransomware?

Ransomware is a type of malware that holds a victim's files, computer system or mobile device ransom, restricting access until a ransom is paid. Operating systems that can be infected include Windows, Mac OS X and Linux. Some ransomware variants are also known to traverse across the network and encrypt all files stored in shared and/or network drives. The more prevalent type of ransomware today encrypts commonly-used files, such as user documents, images, audio, and video files. By encrypting these files with a strong encryption (2048-bit or more), these files are rendered irrecoverable unless a decryption key is obtained. The diagram below illustrates some of the ransomware variants identified by researchers in recent years.





A compromised computer is a hazard to everyone else, too – not just to you.

Source: UC Santa Cruz Information Techology Services@ Sep 2015





What is the latest trending malware?

Answer: Digital Currency Mining.



Digital Currency Mining

https://www.coindesk.com/information/how-bitcoin-mining-works/

https://www.reuters.com/article/us-crypto-currencies-mining-analysis/computer-shops-embrace-lucrative-business-outfitting-cryptocurrency-miners-idUSKCN1G502L



Bitcoins

Get reward in form of digital currency by being the first to complete a mathematical computation. A lot of computing power is required to do this.



Monero



Digital Currency Mining Malware

Slow browsing? Hackers could be mining bitcoin



If you feel your Internet connection has been slower in the past few months, ...you may be a victim of a new form of malware.

Cyber-security researchers have seen a <u>spike in cryptocurrency</u> <u>mining malware</u> this year, as well as a new trick called cryptojacking, where websites are infected with software that prompts visitors' computers to mine cryptocurrency when they visit the website.





How to block bitcoin mining websites



- 1. Go to C:\Windows\System32\Drivers
- 2. Edit the **hosts** file using notepad and enter the following values:
- 0.0.0.0 afminer.com
- 0.0.0.0 coin-have.com
- 0.0.0.0 coinerra.com
- 0.0.0.0 coinhive.com
- 0.0.0.0 coinnebula.com
- 0.0.0.0 crypto-loot.com
- 0.0.0.0 hashforcash.us
- 0.0.0.0 jescoin.com
- 0.0.0.0 ppoi.org

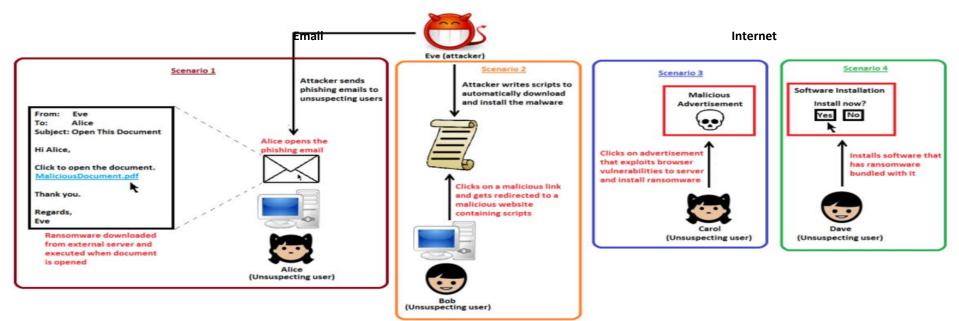


https://www.csa.gov.sg/singcert/news/advisories-alerts/alert-on-browser-based-digital-currency-mining



What are the Sources of Malware?

Source: https://www.csa.gov.sg/singcert/news/advisories-alerts/ransomware, https://support.kaspersky.com/viruses





"Removable drives, flash memory devices, and network folders are commonly used for data transfer. When you run a file from a **removable media** you can infect your computer and spread the virus to the drives of your machine."

~ kaspersky

"Software vulnerabilities are most common targets of hacker attacks. Vulnerabilities, bugs and glitches of software grant hackers remote access to your computer, and, correspondingly, to your data, local network resources, and other sources of information" ~ kaspersky



...Beware of Infected USB

Public servants barred from using unauthorised USB drives 🛕 CHANNEL NEWSASIA

14 Jul 2017 02:48PM

(Updated: 14 Jul 2017 04:54PM)



The move comes after <u>Internet access was cut</u> from the work computers of all 143,000 public officers earlier this year, in a bid to prevent cyberattacks. Officers are still able to surf the Internet, but only on mobile devices or computers that are not connected to the office network.

"USB storage devices continue to be a means to introduce malware and exfiltrate data, especially as they have the potential to be easily misplaced," it said.



...Beware of Fake Apps

https://www.csa.gov.sg/singcert/news/advisories-alerts/fake-mobile-apps

With the global wide-spread infection of a ransomware known as "WannaCry" aka WanaCryptor, fake mobile apps in Google Play are emerging to promise protection from the ransomware. However, the "WannaCry" ransomware does not target phones. These fake mobile apps disguised as anti-virus apps actually contain malware. Appended below is a list of known free fake anti-virus apps obtained from RiskIQ/CNET.



App Title - Developer

360 Antivirus Clean Mobile – SmartAPP
360 Security – Antivirus Boost – 360 Mobile Security Limited
Ace Security-Antivirus Applock – Super Security Tech
Android Antivirus 2016 – HappyAPP11 Studio
Antivirus – Master VPN
Antivirus & Mobile Security – Topi Maxi Group
Antivirus Clean – AVC Security Joint Stock Company
Antivirus - Mobile Security – JRMedia

Antivirus Security Protection – Fyzverous Studio Antivirus Complete Security – Appswale

Antivirus - Virus Cleaner - Mars Std

Antivirus Cleaner And Booster - Praecofac

Antivirus for Android - Antivirus Free for Android

Antivirus - Mobile Security - Playnos Yalp

Antivirus for Android - Android Antivirus

Antivirus - Security & Applock - Acrid Jute

Antivirus Pro - virus removal - GuardforPrivacy

Antivirus & Mobile Security - PetuApp

Antivirus Complete Protection - sagamore

Antivirus Discount Deals - MigenBlog Free Apps

Antivirus 2017 & Virus Removal (Virus Remover) - Pontus Studio

Antivirus Manual – Havana Apps

Antivirus for Android 2016 - AproGar LABS best Antivirus apps on android - ArtusTech

Cleaner Master Antivirus Pro – RED ANDRO SOLUTIONS

CoolAntivirus Antivirus - SOR ENTERTAINMENT, S.L.

CM Security Antivirus Theme - ANDROID THEME

Defenx Antivirus - Suite - "Defenx SA"

eScan - Tablet Antivirus - MicroWorld

Free Antivirus Pro 2015 - NCN-NetConsulting Ges.m.b.H.

Free Antivirus 2016+ Ram Boost - H2 Free Antivirus 2016+RAM Boost & Applock

Free Antivirus 2016 - FreeAntivirusTeam

Free Antivirus 2015 For Mobile - Free Antivirus 2015 For Mobile & Tablet

F-Secure Antivirus Test – F-Secure Corporation GO Speed (Cleaner & Antivirus) – FREEAPPSU

Mobile Antivirus Security - Blue Application

Mobile Antivirus & Security - Kiem tien de nhu choi

MP Security Antivirus App Lock – MPSecurityLabs
Netlux Mobile Antivirus – Netlux Systems Private Limited

NQ Mobile Security & Antivirus - NQ Mobile Security (NYSE:NQ)

Power Antivirus – Virus Clean - PICOO Design

SecureBrain Antivirus (BETA) – SecureBrain

SecureIT Antivirus & Security - SecurityCoverage, Inc.

Security Antivirus 2016 – Funny for Apps Security Antivirus 2016 – Joker Mush Gero

Security Antivirus 2016 – Zebeena

Security Suite: Free Antivirus - Mobile Cloud Labs Plc.

Smadav Antivirus 2017 - smailapps

Scan - Tablet Antivirus - MicroWorld

Super Antivirus Cleaner 2017 - NightCorp

syncNscan - Security/Antivirus - syncNscan Mobile Security

Total Antivirus Defender FREE - Security Defend

Test your Antivirus – Guillermo HernÄindez Cabrera VIRUSfighter Antivirus FREE – SPAMfighter aps

Webroot Security & Antivirus - Webroot Inc.

XRIME Mobile Antivirus – XRIME Mobile

Zoner Antivirus Test - ZONER, Inc

Zoner Antivirus - Tablet - ZONER, Inc.

Zoner Antivirus - ZONER, Inc.

ZenMate Antivirus Security - ZenGuard GmbG



...Beware of Vulnerable Apps

http://thehackernews.com/2017/09/ccleaner-hacked-malware.html

Warning: CCleaner Hacked to Distribute Malware; Over 2.3 Million Users Infected



...is a popular application with over 2 billion downloads, created by Piriform and recently acquired by Avast, that allows users to clean up their system to optimize and enhance performance

Avast and Piriform have both confirmed that the Windows 32-bit version of CCleaner v5.33.6162 and CCleaner Cloud v1.07.3191 were affected by the malware.

Affected users are strongly recommended to update their CCleaner software to version 5.34 or higher, in order to protect their computers from being compromised



Best Practices



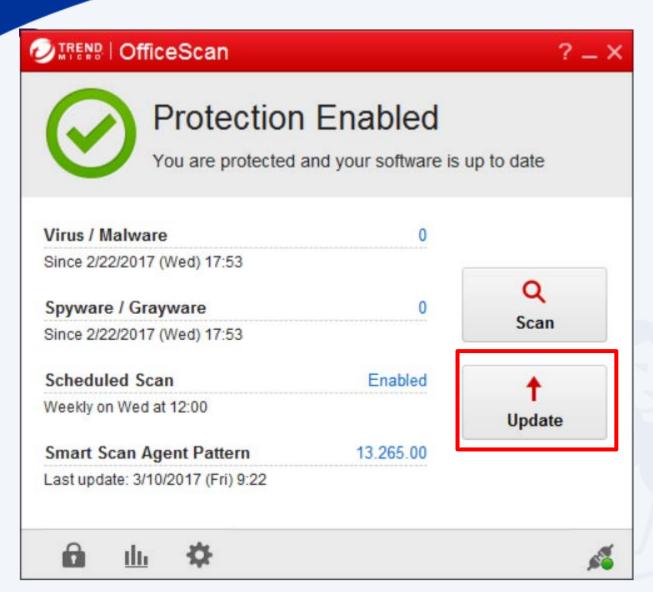


What are the protection measures?

- Perform data backup regularly.
- 2 Keep your machines up to date with anti-virus software.
- 3 Keep your Operating System and Software updated.
- Do not download the software from untrusted source.
- Report suspicious email. Do not open the attachments or visit the websites.



University Virus Scanner







Window OS Updates

Settings\ Update and Security

← Settings		
UPDATE & SECURITY		
Windows Update	Some settings are managed by your organization.	
Windows Defender		
Backup	Windows Update Your device is up to date. Last checked: Today, 8:58 AM	
Recovery	Check for updates	
Activation		
Find My Device	Available updates will be downloaded and installed automatically.	
For developers	Looking for info on the latest updates?	
·	Learn more	
	Check online for updates from Microsoft Update.	
	Advanced options	



Confidentiality



Singapore privacy watchdog fines and warns II organisations for data breaches



PDPC noted in a press release today (April 21) that 90,000 members' personal data were sent in an unencrypted email between K Box and its IT vendor, Finantech

The personal data of over 300,000 customers were exposed, with the firm possibly facing sanctions for lax security. Their names, addresses and mobile phone and identity card numbers were posted on several websites

Investigations by PDPC found that someone had extracted customers' information from K Box's computers and uploaded the data on file sharing website pastebin.com because the karaoke chain's security measures were lax. For instance, it did not update its computer software with the latest version, and computer account holders had weak passwords comprising only one letter in the alphabet.

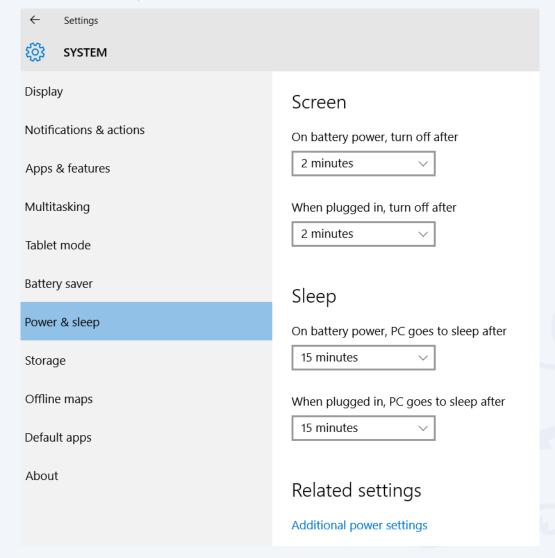


Source: Straits Times, Asia One @ Apr 2016



Window Screen Lock

Settings\ Personalization\ Lock Screen





Forgot to lock your screen? ...Beware of key Logger

http://www.channelnewsasia.com/news/singapore/smu-law-student-jailed-2/2519788.html

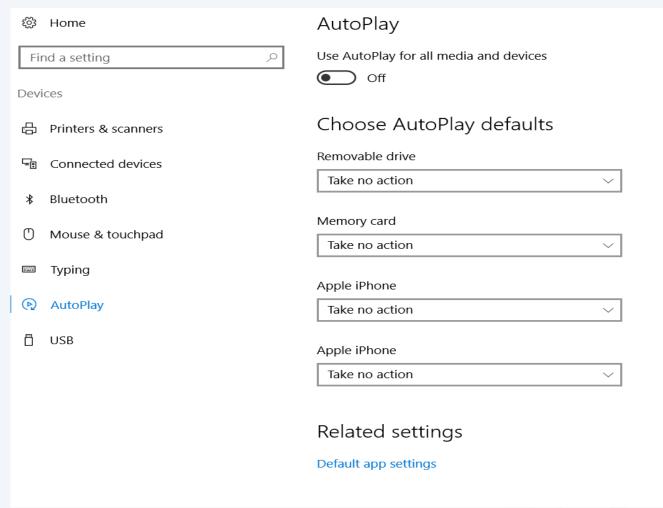
SMU law student jailed 2 months for accessing professors' accounts

By Vanessa Paige Chelvan Posted 16 Feb 2016 17:40 Updated 16 Feb 2016 18:37





Prevent USB from being auto run on your laptop

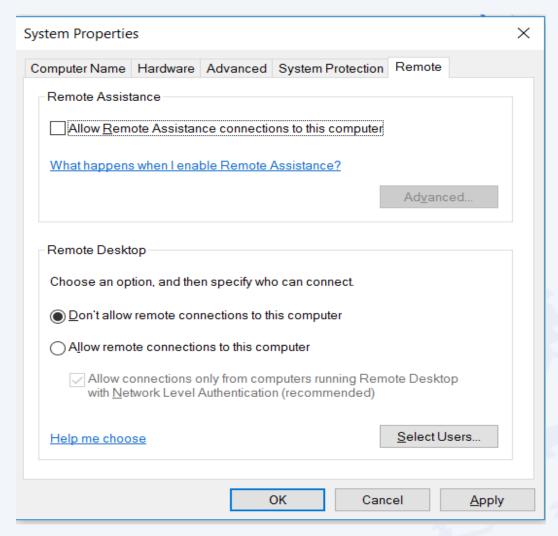




Furn off Remote Desktop Connection to your PC



SystemPropertiesRemote.exe



Note: This state disallows remote access to your computer.

eduroam Secured

NUSOPEN

Connect automatically

Connect





Which University WiFi should I use?

Answer: NUS



Turn off Network Discovery



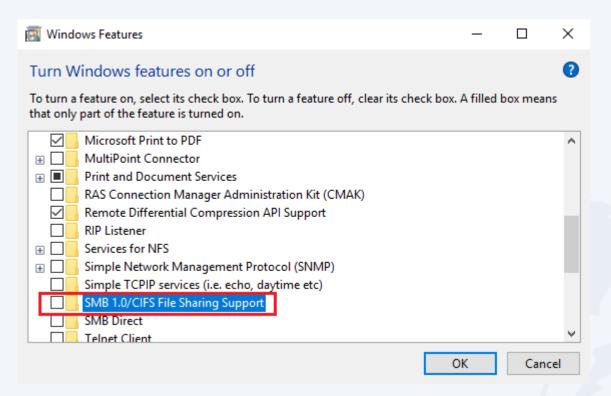
• Advanced sharing settings	_	
← → ✓ ↑ • Network and Sharing Center → Advanced sharing settings	Search Control Panel	م
Change sharing options for different network profiles		
Windows creates a separate network profile for each network you use. You can choose specific each profile.	c options for	
Private —		
Guest or Public (current profile)		
Network discovery		
When network discovery is on, this computer can see other network computers and ovisible to other network computers.	devices and is	
Turn on network discoveryTurn off network discovery		
File and printer sharing		
When file and printer sharing is on, files and printers that you have shared from this obe accessed by people on the network.	computer can	
Turn on file and printer sharingTurn off file and printer sharing		
Domain —	$\overline{\hspace{1cm}}$	
All Networks		
Save changes	Cancel	

Note: This state disallows your computer to see other network computers and devices and disallows people on other network computers to see your computer.



Disable File Sharing (SMB v1)

Open Control Panel > Programs & Features > Turn Windows features on or off. Make sure it is unchecked. Restart your computer.

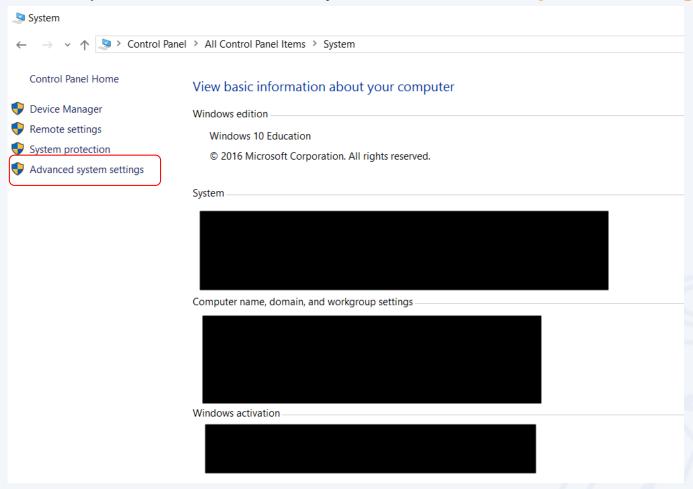


Note: This is an obsolete components for shared access to files and printers and should be disabled.



Enable Data Execution Prevention (1/3)

Open Control Panel > System > Advance System Settings

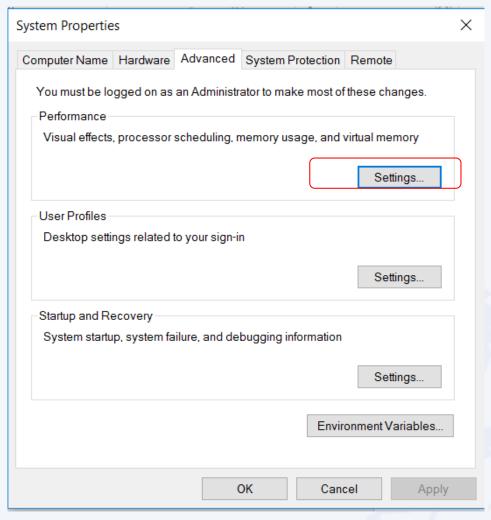


Note: This ensures program are not run on unauthorized memory area



Enable Data Execution Prevention (2/3)

Open System Properties> Advance > Performance > Settings



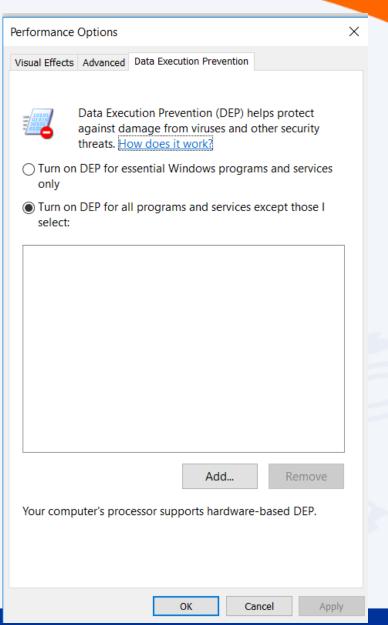
Note: This ensures program are not run on unauthorized memory area



Enable Data Execution Prevention (3/3)

Open Performance Options > Data Execution Prevention

Select the option, "Turn on DEP for all programs and services except those I select". Leave the selection list empty and click on OK.





https://privacy.microsoft.com/en-gb/windows-10-microsoft-edge-and-privacy

SN	Settings	Values
1	Password and Form Data	Do not remember passwords and form data
2	Cookies	Don't allow third party cookies
3	Pop up blockers	Block pop up (that often comes from advertisement)





Read Advisories



- https://nusit.nus.edu.sg/its/
- 2 http://www.straitstimes.com/tags/cyber-security
- 3 https://www.csa.gov.sg/singcert/news/advisories-alerts
- 4 https://www.scamalert.sg/





Thank you! Every question you asked contributes to the FAQ list that we are building for NUS community.





How do I know if my mobile phone is infected?



https://www.csa.gov.sg/singcert/news/advisories-alerts/fake-mobile-apps

Impact

The malware author can obtain sensitive information such as passwords and personal details from affected phones. Users may risk paying for a fake subscription to ensure the security of their mobile devices. Users with an infected phone will observe the following symptoms:

- · Annoying ads pop up when data connection is available
- Sluggish phone performance
- Automatic downloading and installation of apps
- Existing apps function differently from usual
- · Fake notifications or warnings on the mobile device
- Decrease in phone storage capacity

Prevention

- · Do not download or install apps from non-official app stores
- Use a reputable anti-virus/anti-malware scanner to scan apps before installing
- Do not click on suspicious links, web pages or advertisements