

AES 1809299 Matthew James

by Matthew James

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TIME SUBMITTED	09-JAN-2019 02:40PM (UTC+0000)	WORD COUNT	4853
SUBMISSION ID	98589903	CHARACTER COUNT	24276

ACADEMIC AND EMPLOYABILITY SKILLS

version 1.0

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No.: 1809299

1. Abstract

This report will cover all details and knowledge gained through the academic and employability skills module. Within the report will be information on lecturer presentations, author conducted key skills and self-evaluations, author action plans for long- and short-term goals, data backup strategies and self-organisation. Additionally, attaching all pieces of work related to the skills shown during lectures such as skills evaluation questionnaires, self-assessments surveys and a report on CryptoWall ransomware.

2. Introduction

Within this report, the author will discuss the knowledge gained and the effect it has had on them during the academic and employability skills module. The author will be going in depth on the Key Skills they have acquired while undertaking activities as well as the benefits that research has had on them. Carrying on through the report, it will cover long term and short-term goals and activities that accompanied this. Backup strategies and associated work such as the “in 3 different place rules”, risk assessment and ransomware exercise. Time management and self-organisation tasks included describing the authors steps to enhance productivity and organisational skills.

3. Class presentation

While trying to make a presentation the author found that he struggled to do so, simple things about the author evaded him, hobbies, interests and especially trying to figure out what strengths and weakness the author has. Taking Personality tests (as shown in the appendix) as instructed by the lecturer and asking close friend and family what they considered the author to have interests in and act, the author found that he has been given more information to use within the presentation. Going through the power point as shown in figures 1-4 the slides began to fill up with information about the author.

3.1 Improvements for future presentations

The lecturer provided feedback to each student following the presentation. The feedback was presented via email as shown in figure 5.

The author found many aspects that they could improve on when going to produce future presentation:

- Trying to not talk so fast and keep to the 5-minute time limit
- To structure presentation better so that they stay consistent at all times
- Keeping eye contact with the audience

The author began to search online for tips on how to successfully deliver a presentation for future presentations. An example, Jacqueline Whitmore suggest keeping to these top 10 tips can and will help people deal with public speaking: [1]

- Keeping it simple
- Stick to three points
- Engage your audience
- Use visuals
- Be honest
- Move around
- Share stories
- Be conversational
- Consult and expert
- Practice makes perfect

As the presentation was about the author, there was no need for consulting an expert, however, the author struggles with time management and as such did not practice the presentation, this is by far the biggest weakness and will have to be worked on for future presentations, potentially giving them to close friend or families will assist.



Figure 2 - Authors "Friends and Family"



Figure 3 - Where the Author works



Figure 4 - The authors Hobbies and Interests



Figure 5 - Author Feedback

4. Researching skills evaluation

4.1 Key skills for higher education

When attending higher education for the first time and onwards, it is best to keep these 5 key skills in mind as they will assist most students in completing work on time and assist with organisational skills:

- **Written English**
First and foremost, having a strong grasp of the English language is essential. To assist in studying in higher education you must be able to express yourself in a number of written contexts, such as reports, essay, dissertations and exams. Academia is all about getting a point across, whether this be stating a point or arguing a point. Grammar and spelling are also needed as if not done correctly, you can not expect the work to be taken seriously. [1]
- **Note-taking**
A very useful and defining skill is to be able to take notes quickly and efficiently, noting down what information is needed and what needs to be reflected on is a very highly needed key skill. This Key skill is highly regarded as most student tend to just try and remember lectures thus causing them to fall modules. Traditional note taking is done with a pen and paper but more recently students have begun to bring laptops and other devices and write notes as it is faster than writing. [1]
- **Independent learning**
The ability to study independently without guidance from lecturers or teaching staff is essential in higher education as most staff are busy working and attending to other matters. You will need to be able to structure your personal time and learn how to make use of this time by reading additional resources to assist in assignments and other tasks that are coming. Being productive during 'down' time is usually the best time to start using this key skill. [1]
- **Time Management**
This is one of the more critical key skills that any higher education student will need in order to pass assignments and other deadlines, higher education can be daunting as student get hit with new and exciting experiences such as social clubs, new people and new study programs unlike previous education. It is vital to manage all this effectively as it can become over boarding very fast, some of the key ways to keep time managed effectively is to create a calendar with all your new activities, creating 'To-Do' lists with all tasks and deadlines can be a huge help when dealing with higher education. [1]

4.2 Key skills to employer

When applying for jobs after or during higher education, its best to highlight your key skills that employers will be looking for are transferable skills such as:

- **Teamwork:**
Teamwork is a very high priority when looking for personal, it's all about working together and operating as one collective in a group. Although this is a key skill, it does draw upon other skills such as Communication, Problem solving, negotiation and persuasion as well as a handful of other skills. By working in a team, you can cover for other people's weaknesses allowing this group to succeed.
- **Working under pressure**
Having the ability to work under pressure involves dealing with strict constraints which can often be out of your control. Employers value these skills as in the workplace things can often change at last minute and will need a change in scope. Unforeseen changes happen, or problems occur regardless of how well you have prepared. By being able to work under pressure makes a person very valuable. [2]
- **Communication**
Communication is key anywhere, whether you are interacting with a client, a colleague or customers, the ways that we can communicate are vast and are important. Body language is one way of showing communication and is used everyday to get points across to people. The type of language being used and to who the language is being used to is very important factors, employers will look for the way you talk to certain individuals and how you come across. Employers first impression of you are via your C.V or application method. [3]
- **Organisational skills**
Good organisational skill typically means that you can carry out work to tight deadlines. It highlights your time management skills, priority skills as well as you are self-motivated and proactive. This ties in with leadership, as leaders tend to be organised, motivated and self-driven. [4]

4.3 Self-Evaluation

After the presentation was conducted the author was given another task, a task to do a self-evaluation then compare those results with online resources.

4.3.1 Strengths and Weaknesses

The author strengths and weaknesses that were in the presentation are very similar to the self-evaluation test taken after the presentation was given.

4.3.2 Personality type

The author has a brief section on personality which will be compared to online personality tests:

The first test results are:

ESFJ - The Caregiver

Warm-hearted, popular, and conscientious. Tend to put the needs of others over their own needs. Feel strong sense of responsibility and duty. Value traditions and security. Interested in serving others. Need positive reinforcement to feel good about themselves. Well-developed sense of space and function.

This somewhat matches the authors original thoughts of their personality as it comes close to what you expect the author to be like, words such as helpful, honest and capable tie in with the ESFJ results for “feels strong sense of responsibility and duty”. The results were more or less the same as the author put in their presentation. The second test results are:

ISFP - The Artist

Quiet, serious, sensitive and kind. Do not like conflict, and not likely to do things which may generate conflict. Loyal and faithful. Extremely well-developed senses, and aesthetic appreciation for beauty. Not interested in leading or controlling others. Flexible and open-minded. Likely to be original and creative. Enjoy the present moment.

This matches the author far better than the first test. The author has described themselves as an introvert which is a quiet type of person and usually stays away from others as they do not like to get pulled into situations. The results were more or less the same as the author put in their presentation.

Self-evaluation show what ur results were on ur self evaluations and compare with my own description of myself on the powerpoint

5. Action Plan

5.1 Short- & long-term action plan

The author created a short- & long-term action plan

Short term action plan		
What?	When?	How?
1.Improve time management	Jan 2019	By setting up a google calendar or keeping a diary
2.Preparing presentation	Jan 2019	Look up presentation guides online E.G Youtube, Google, Website
3.Strategies for starting new assignments	Jan 2019	By looking online for tips
4. Making Notes	Jan 2019	Bringing a note book or laptop and noting down relevant information

Long term action plan		
What?	When?	How?
1.Go abroad	Aug 2019	By making enough money in my job
2.Pass University	July 2023	By studying and completing deadlines
3.buy a house	Jan 2025	By making enough money in my job and look for a suitable place
4. Have a job in the I.T industry	July 2023	By passing university and completing additional qualifications to progress

6. Application of knowledge

7.1 Looking after your data

7.1.1 Back up strategies

During the authors lectures, a lecture on Backing up data was delivered, this lecture was based on the “in 3 different places” rule, this was delivered so that the author would gain an understanding on what a robust level of data protection would look like. The author was tasked to use this rule and map out how they would back up data and why this was important during time at higher education and further on in life.



Figure 4 - Top 5 cause of data loss

Back up Strategies:

- The first location:
Saving data onto a local physical storage weekly is one of the most common methods of backing up data. The most likely cause of data loss is hardware related as a survey in 2016 suggests. Its best to back up data weekly to an external hard drive in the event that the current hard drive fails or corrupts via other means such as viruses. [5]
- Second location
Using a Network attached Storage (NAV) drive, a NAV is similar to a cloud, any number of users can access the NAV and input, change or delete data. NAVs are very flexible as they can be access at anytime, anywhere around the world. The author would place a NAV at an offsite location in the case of an accident such as a fire. Locations such as a storage complex or a parent’s house are the most common places. Additionally, NAVs have internal batteries incise of any power cuts. [6]
- Third location
Cloud storage is one of the easiest methods of storage as you simply drag and drop items into the cloud. This process may take a long time but its offsite, the likelihood of it being corrupted via a physical attack is highly unlikely as the data is stored within a highly secured warehouse. Clouds storages such as Drop Box, SkyDrive and Google Drive are highly renowned cloud storages.

7.1.2 Possible disasters

Disaster:	Power cut
Location 1	This disaster would not affect this type of storage as the hard drive is not being used and is being kept within a secure location
Location 2	Without Power the NAV drive will still function as most of them have back up batteries inside them.
Location 3	This would not be affected as all data is not on your device, similarly with a NAV data

	is kept offsite and will have back up batteries to prevent data loss and allow it to keep working without assistance from the mains.
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Disaster:	House fire
Location 1	This may affect this storage location as it is within the authors house, dependant on the severity of the fire will determine whether the data is lost.
Location 2	As this device will be placed offsite from the authors house, this will be a safe method of backing up data
Location 3	This would not be affected as all data is not on your device, similarly with a NAV data is kept offsite and will have back up batteries to prevent data loss and allow it to keep working without assistance from the mains.

Disaster:	Flood
Location 1	This will not affect this method of storing data as the external hard drive will be located somewhere safe from water contamination
Location 2	As this device will be placed offsite from the authors house, this will be a safe method of backing up data
Location 3	This would not be affected as all data is not on your device, similarly with a NAV data is kept offsite and will have back up batteries to prevent data loss and allow it to keep working without assistance from the mains.

Disaster:	Virus
Location 1	This will not affect this method of storing data as the external hard drive and will not be connected to any network or computer device.
Location 2	This could become corrupt dependant on the authors protection and complexity of the virus attack, NAVs are connected to the host machine meaning it can go through the network and infect all contents on the NAV.
Location 3	Dependant on the third-party cloud storages solution all communications from the host

	computer may be blocked from uploading it the cloud service has detected a virus.
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Disaster:	Earth Quake
Location 1	This will most likely destroy the hard drive, dependant on the severity of the earth quake as houses may crumble on top of the device completely destroying the external hard drive.
Location 2	This will most likely destroy the NAV drive, dependant on the severity of the earth quake as houses may crumble on top of the device completely destroying the storage solution.
Location 3	Cloud storage will all depend on what the third-party storage solution has in place to prevent this situation, back up policies may include transferring all data to another location every week meaning that the data may be safe.

Disaster:	Theft
Location 1	This storage solution would no longer be available as the hard drive would be stolen.
Location 2	This storage solution would no long be available as the NAV drive would be disconnected from the network and taken.
Location 3	Cloud storage will all depend on what the third-party storage solution has in place to prevent this situation, back up policies may include transferring all data to another location every week meaning that the data may be safe.

7.1.3 Ransomware exercise

The author was tasked with a scenario on which they had to produce a brief report on Ransomware using CryptoWall trojan as the example. From this the author learnt of the different types of malware and how they can harm the data stored on a machine, the preventive measures that can be taken to stop the infection from happening and how to deal with a virus infection. More information on the Ransomware report can be found in the appendix.

6.2 Time management and self-organisation

To assist in time management and self-organisation, the author intends to take the steps as followed:

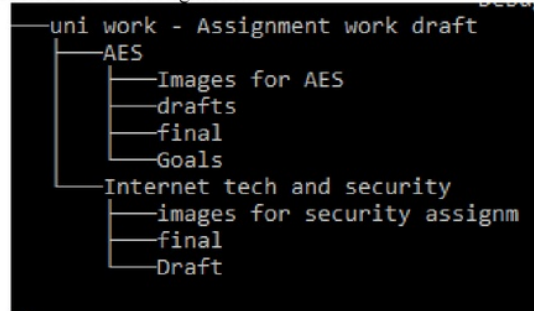
- Managing time when given tasks
- Preparing and delivering oral presentations
- Strategies to assist in starting new assignments/tasks
- Making, strong and informing notes

The goal of this is to assist in reducing stress levels by getting a clear directive on the authors time. If the author gets stressed, they will typically go get a drink and come back with a fresh mindset and look at the problem with a different view, this helps stop procrastination and increase productivity levels.

6.2.1 Evidence

This is my complete E-portfolio of my work.

This shows the file structure for both assignments.



Matthew James 4 Four Acres Close, Barry, Vale of Glamorgan, CF83 2AL Email: MatthewJames@hotmail.com Tel: 01445 404157 / Mob: 07707 052042 Personal Profile I have very good technical skills and a good working knowledge of all computer systems and programmes. I am hardworking and able to work well under pressure to set deadlines and complete work to a very high standard. I have some web design and coding skills and enjoy all aspects of using and working with computer technology. I work well in groups and am an effective team player who always contributes positively to team. I have completed my BTEC course at my local college obtaining the highest grades possible and seek opportunities to expand my skills and knowledge. Skills • Proficient in Microsoft Office including Excel and PowerPoint • Adept at computer programming & basic web design • Computer literate and internet savvy • Excellent Communication skills • Perseverance skills • Able to balance heavy workloads while producing excellent results • Flexible and adaptive to work situations Employment and Work Experience Employment Nov 2014 - Mar 2015: Iceland, Barry Retail Assistant - Serving customers using a polite, helpful and friendly manner - Cash handling and ensuring safekeeping of daily takings - Organising the stockroom and helping with deliveries - Distributing stock to the shop floor - Keeping the shop area clean, tidy and free from hazards. Work Experience May 2015 - Aug 2015: R&M Valeting, Barry/Cardiff Assistant - Maintaining equipment before and after use - Dealing with customers queries - Using the cleaning equipment effectively Voluntary work Jan 2012 - Sep 2017: Marie Curie, Barry/Cardiff Job Title - Raising money for charity - Creating funding raising events such as discos, day outs - Persuading people to given money and buy tickets for events	Education From date - To date: Cardiff & Vale College BTEC in IT Obtained 3 Star Distinctions (highest grade) Key Skills Level 2 From date - To date: Barry Comprehensive As in Information Technology Grade 8 GCSEs 5 GCSEs Grade C and above Additional Information Watching and playing rugby, supporting Cardiff Blues, also watching football. Keeping up to date with new IT technology and gadgets. Going to the cinema. References References available on request. Professional Jim Weeks Teacher - Cardiff and Vale College Jweeks@carvo.ac.uk 01446 735000 Celce Road, Barry, CF62 8YJ
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<https://www.linkedin.com/in/matthew-james-984985131/> - Author linkedin profile

7. Conclusion & Evaluation

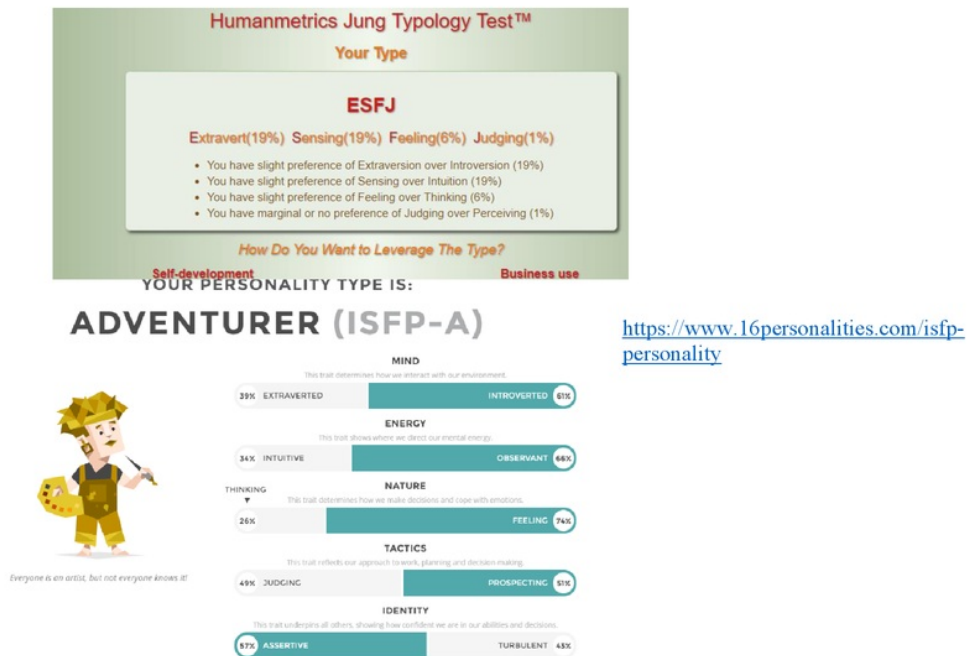
Throughout the academic and employability module, the author has been tasked with many different exercises and have learnt many things. the main areas that the author has learnt from

is, creating and delivering a presentation, the author found that they lack the needed abilities to produce and deliver a successful presentation, this is due to lack of experience in the area. Report writing is another area that the author has struggled with as they have had no experience with writing to this standard, throughout the module the author has gained insight by asking for advice from lecturers and online resources on how to write, present and reference correctly within a report. Studies on backing up data and the “3 different place rule” was new to the author as they did not consider what would happen if they’re data would be lost; especially as past lectures and exercises may be needed further into the educational year. Time management has been an issue for the author since a young age, the topics that were discussed during lectures has made the author aware of using calendars such as Google calendar and their benefits.

8. Bibliography

9. Appendices

10.1 Personality test



9.2 Self-Evaluation of Academic Skills

Skill					
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	5	4	3	2	1
I have the confidence to try new things and express my ideas	X				
I am self motivated and will persevere with difficult tasks			X		
I am organised and can meet set deadlines			X		
I am able to find information from different resources easily	X				
I can read complicated texts and understand the general meaning		X			
I am able to select what is relevant and what is irrelevant in text		X			
I can compare different opinions and decide what are the best grounds for deciding who is right		X			
I can write things in my own words	X				
I am able to reflect and evaluate my own work		X			
I have good strategies for starting a new task/assignment				X	
I have good time management skills and can organise my workload effectively			X		
I am able to make, store and find my notes			X		
I am able to manage a range of writing skills appropriately		X			
I am able to think critically and analytically, and evaluate arguments		X			
I have good memory strategies	X				
I know how to use IT to help academic study	X				
I am confident at preparing and delivering oral presentations					X

10.3 Skills Action Plan

Go back over your answers to the self-evaluation forms you have just completed. Focus on the different areas and identify your current strengths, the areas you wish to develop, and the areas that are a priority in aiding you in your future learning.

Strengths, skills and qualities

- 1.Able to write things down in my own words
- 2.I know how to use It to help academic study
- 3.I have a good memory and memory strategies
- 4.I can find information from different resources easily

What I need to work on, develop or improve

- 1.Managing my time when given tasks
- 2.preparing and delivering oral presentations
- 3.strategies to assist in starting a new assignment /task
- 4.making, storing and finding my notes

My Priorities: What I am going to do, When and How

What?	When?	How?
1.Improve time management	Jan 2019	By setting up a google calendar or keeping a diary
2.preparing presentations	Jan 2019	Look up presentation guides online e.g youtube, google websites
3.strategies for starting new assignments	Jan 2019	By looking online for tips
4.making notes	Jan 2019	Bringing a note book and noting down relevant information

How will I measure if I have improved?

- 1.seeing if I do not miss assignments and lectures
- 2.making presentations and having them peer reviewed
- 3.by sticking to a standardized set of rules when new assignments are given
4. by making notes

10.4 Ransomware CryptoWall

Introduction:

In this report we are going to investigate what malware is, what types of malwares there are, and how it affects the computer system. We will be looking into a type of malware called

CryptoWall which is a ransomware and how to prevent this from entering and infecting a user's computer.

1.1 What is malware?

Malware as explained by AVG 'The term **malware** is a contraction of *malicious software*. Put simply, malware is any piece of software that was written with the intent of doing harm to data, devices or to people. [1].' Malware isn't just one single piece of software, malware is a more generic term, as they're many different types of malware and due to this it becomes hard to identify which malware a user has been infected by. The type of malware will conclude the type of attack and was possible actions it can take while in your computer system or network.



Figure 5- Malware infographic [7]

1.2 Types of malware:

As explained above there are many types of malware and each of them have their own way of going about damaging your system, the following list shows common types of malware and a short description of what they do:

Virus: Like their biological namesakes, viruses attach themselves to clean files and infect other clean files. They can spread uncontrollably, damaging a system's core functionality and deleting or corrupting files. They usually appear as an executable file. [1]

Trojans: This kind of malware disguises itself as legitimate software, or is included in legitimate software that has been tampered with. It tends to act discretely and create backdoors in your security to let other malware in. [1]

Spyware: No surprise here: spyware is malware designed to spy on you. It hides in the background and takes notes on what you do online, including your passwords, credit card numbers, surfing habits and more. [1]

Worms: Worms infect entire networks of devices, either local or across the internet, by using network interfaces. It uses each consecutive infected machine to infect more. [1]

Ransomware: Also called scareware, this kind of malware can lock down your computer and threaten to erase everything — unless a ransom is paid to its owner. [1]

It's not recommended to pay the ransom as a Bitdefender survey says 'less than half (45%) of the SMBs that paid to regain access to their data after falling victim to ransomware actually got their information back.' [2]

Adware: Though not always malicious in nature, particularly aggressive advertising software can undermine your security just to serve you ads — which can give a lot of other malware a way in. Plus, let's face it: pop-ups are really annoying. [1]

Botnets: Botnets are networks of infected computers that are made to work together under the control of an attacker. [1]

2. CryptoWall

2.1 What is CryptoWall

CryptoWall is a type of malware which encrypts the files of the compromised computer and prompts the user to pay a 'ransom' to unencrypt the files. This 'ransom' payment is not just money any more, but it can be other things such as a variety of bitcoin and electronic data. 'CryptoWall 3.0 by far the most lucrative version so far. It uses strong RSA-2048 encryption to lock your files'. (2014) [3]

As time has move on the development of new technologies has also, more up-to-date attacking methods have been developed, and CryptoWall is no different.

'CryptoWall v4 introduced a new feature to encrypt both the files and the filenames.' [3] This means that if the compromised computers organisation can no longer just replace file that had been encrypted as it previously shown the filename. If the organisation had a backup strategy's in place they most likely could have searched the filename and simply replace it with the old data, this did leave potential of huge data loss as the frequency of the data backup may be lacking.

As of when this article was written, 'CryptoWall v5.1 is the latest version based on the HiddenTear malware. It uses a different AES-256 encryption' [3].

FILETYPES VULNERABLE TO CRYPTOWALL ENCRYPTION			
.XSL Excel Spreadsheet	.PDF Portable Document Format	.GIF Graphical Interchange Format File	.ASS Angiub Advanced Substation Alpha
.WPD WordPerfect Document	.PDB Program Database	.EPS Encapsulated PostScript File	.ASP Active Server Page
.WB2 Webshots Picture File	.PAS Delphi Unit Source File	.DTD Document Type Definition File	.JS JavaScript File
.TXT Plain Text File	.ODT OpenDocument Text Document	.DOC Microsoft Word Document	.PY Python Script
.TEX LaTeX Source Document	.OBJ Wavefront 3D Object File	.DER DER Certificate File	.PL Perl Script
.SWF Shockwave Flash Movie	.MSG Outlook Mail Message	.CRT Security Certificate	.DB Mobile Device Database File
.SQL Structured Query Language	.MPG MPEG Video File	.CPP C++ Source Code File	.C C/C++ Source Code File
.RTF Rich Text Format File	.MP3 MP3 Audio File	.CER Internet Security Certificate	.H C/C++/Objective-C Header File
.RAW Raw Image Data File	.LUA Lua Source File	.BMP Bitmap Image File	.PS PostScript File
.PPT PowerPoint Presentation	.KEY Software License Key File	.BAY Casio RAW Image	.CS C# Source Code File
.PNG Portable Network Graphic	.JPG Joint Photographic Experts Group	.AVI Audio Video Interleave File	.M Objective-C Implementation File
.PEM Privacy Enhanced Mail Certificate	.HPP C++ Header File	.AVA AvasBook eBook	.RM RealMedia File

Figure 6 - Types of files vulnerable



Figure 7- Logo for CryptoWall [8]

“When CryptoWall first infects the system, it will scan you for data files and encrypt them using RSA encryption” [4] which was previously spoken about. By having this RSA “encryption” the user cannot access any of the files on the computer as they are compromised. Once CryptoWall has finished encrypting the files, a notepad window would pop up instructing the user to access CryptoWall Decryption Service where the user would have to pay a ransom of \$500 and ever increasing to over \$1000 after 7days. The ransom must be paid in bitcoin sent to an ever-changing bitcoin address.

How does a machine get infected?

There are many different ways that a user’s computer can get infected by malicious code not specifically malware. Malware can be created for a single purpose or multiple purposes as we have covered in the ‘Types of Malware’ section above. The ways that malware are transported from the creator to user. The most common method of infecting users is emails which are usually being used for advertisement but can be disguised to look like an innocent normal email but actually contains things such as photos which a user has to download in order to see. Downloading this photo also brings along the malicious code which is hidden inside of the image’s code.

[5]

Other ways that users are infected are by the internet and by physical means of using storage devices such as a USB and plugging them into the system and manually uploading the file to the system. [4]

This infographic shown demonstrates a simple email and what it could potentially do to the user’s computer. The malware once inside the machine begins to infect the files and encrypt them so that they may no longer be read by the user. In this instance we are talking about CryptoWall and CryptoWall uses an AES-256 encryption method.

2.2 What mitigation controls are in place to prevent malware infection

This information was guided by ‘The State of CryptoWall article [3], It is unlikely if you were to get hit by CryptoWall that you will get back the files which were infected, in this case as well as most if not all ransomware/malware, prevention is the best method.

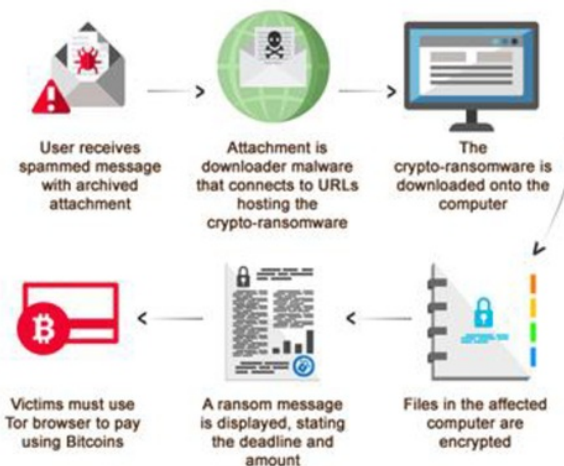


Figure 8- Malicious email infographic [10]

Some tricks and tips can help the user prevent infection and keep files safe, here are a few:
Keep your computer patched and up to date.

Most malware are created to target vulnerabilities in software and use those holes as an open door on which they enter the system and infect the host. If you keep your operating system and applications patched to the latest versions the user would stand a better chance at avoiding malware infections.

Anti-virus

Using an Anti-Virus can protect the user in more ways than one. The main purpose of an Anti-Virus is to find and quarantine infected files while preventing them from executing code/commands which could prove harmful to the system. After found the infected files are removed.

Emails

Emails are one of the easiest ways for malware and other malicious artefacts to enter the system. When browsing through emails the best practice is to not click anything you are not expecting, anything that looks suspect or spelt wrong.

Safe Browsing

When browsing the internet, users can fall trap when visiting websites if there browser is not up to date. New exploitations are being made and JavaScript is one of the main culprits as most browsers have this activated by default. Which in turn allows malicious users can execute code into your browser and try to infect the user's computer.



Figure 9- Types of Anti-Virus Software [9]

From the Bitdefender survey it goes on to say 'From those targeted, most were able to mitigate the attack by restoring from backup (65%) or through security software/practices (52%)' [2]

This indicates that having mitigation and standard practices can go a long way to stopping and defending against attacks.

2.4 Best practices to prevent against malware infection

[6]To prevent a computer from becoming infected by CryptoWall or any other type of malware, there are 'best practices'.

Install Anti-Virus software

Keep Anti-Virus up to date

Run Regular scans

Keep Operating system up to date

Secure your network

Think before you click

Keep your personal information safe

Don't use open Wi-Fi

Back up files

Strong passwords

3. Conclusion

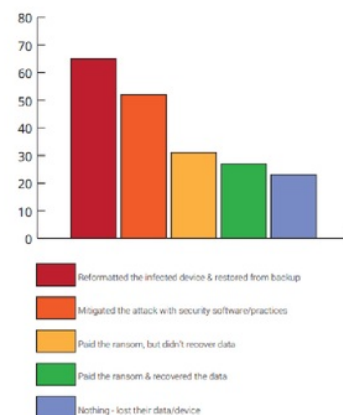


Figure 10 - How SMBs addressed the ransomware attack (%)

As the research has demonstrated ransomware is a type of malware which is created with the intention of doing harm to a user and their system. Ransomware can infect a user's computer and encrypt files which in turn prevent the user accessing them until a fee is paid. This is not recommended as less than half of users infected and paid the ransom get their data restored/given back.

CryptoWall is a ransomware which does this. Once in the system it is very unlikely that you can get it out without paying high costs to either CryptoWall themselves or a security specialist with enough knowledge to decrypt the files which is unlikely. It

From the findings, it is best to prevent infection beforehand as it will be very unlikely that you can purge the infected system from malware once infected as discussed previously 65% of infected users restored from a backup and 52% through security software/practices.

FINAL GRADE

GENERAL COMMENTS

Instructor

45/100

PAGE 1

PAGE 2

PAGE 3

PAGE 4

PAGE 5

PAGE 6

PAGE 7

PAGE 8

PAGE 9

PAGE 10

PAGE 11

PAGE 12

PAGE 13

PAGE 14

PAGE 15

PAGE 16

PAGE 17

PAGE 18

MATTHEW JAMES**223****ENGAGEMENT WITH LITERATURE**

Some research sources used, but this needs to be far more extensive and show in more detail how your reading has influenced or backs up your own comments. I know you didn't include the reference list in your submission, but I can see them in the original document. However you haven't set it up correctly to IEEE, and then you haven't hit the button to insert the list, so its looking as if you don't know how, rather than you've uploaded a 'wrong' version!

35**KNOWLEDGE AND UNDERSTANDING**

Could have added more content in a number of places. The report is just a little brief as is. Often the commentary is just skimming the surface – needs more depth and detail.

45**COGNITIVE AND INTELLECTUAL**

Often too much reliance on simply presenting data. Need to use this information and extract meaningful

45

conclusions or new recommendations etc.

Research/Data/information collection is one thing, but what you do with it is also important. Could have done more in terms of analyzing the results and formulating plans to make good any weaknesses, (based on more extensive research into these identified areas)

PRACTICAL APPLICATION



You have described what hardware/services you intend to use for your backups, however you haven't really described a STRATEGY in enough detail – how EXACTLY will the work get backed up? How will you ensure it happens? How will you test the integrity of the backup etc etc. some areas lacking in evidence to describe what steps are going to be taken to improve/change in view of the findings or actually showing evidence to demonstrate things are actually being put into place (e.g. evidence of actually USING a calendar system, rather than just mentioning it) Weak PDP implementation. Could have done much more in this area.

48

TRANSFERABLE SKILLS



Should really include a table of contents. Many of the graphics/diagrams/visuals are too small to be able to be read properly.

50