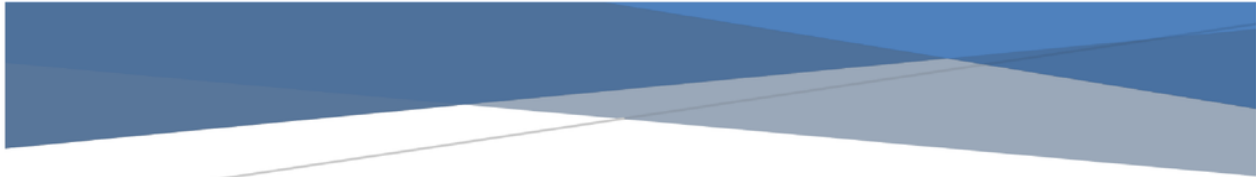


REFLECTION ON ACADEMIC AND EMPLOYABILITY SKILLS REPORT

by Peter Evans

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REFLECTION ON ACADEMIC AND EMPLOYABILITY SKILLS REPORT

By Peter Evans (1810610)

Academic and employability skills ACCA4016
University of Wales Trinity Saint David

The work of this report completed under the supervision of (name supervisors). I declare that this report is the product of my own work and is not being submitted for any other degree etc.

Signed – Peter Evans

Abstract

This report is a reflection of the Academic and Employability skills module attended by the author at University of Wales Trinity Saint Davids.

Word count = 4116

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1. Introduction

The following report follows the progress of the author through the academic and employability skills module. It will cover a brief introduction and background of the author. It will also include personality traits, personal and professional goals with sample action plans to reach future goals. The author is a keen technologist and works in the information technology sector therefore includes details of his own home backup solution covering a number of disaster scenarios including details of ransomware threats. The final section details the authors time management and organisational techniques. The organisational techniques mentioned are then demonstrated by displaying the structure of the authors e-Portfolio which contains personal and professional documents and future goals.

2. Brief Overview of the Author

2.1 Presentation Overview

Name – Peter Evans

DOB – 07/01/87

Family – Wife and 2 Children

Occupation – Infrastructure Engineer for Hywel Dda Health Board & Deputy Station Officer for HM Coastguard

Hobbies include

- Digital Cinema Projectionist
- Tropical Marine Fish
- Scuba Diving
- Mountain Biking
- Appeared as extras on TV Series.

Personality Test.

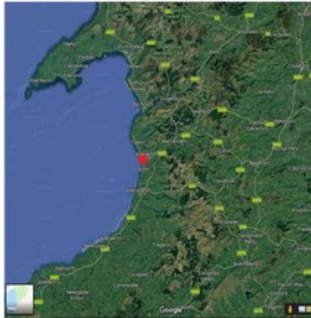
The Author conducted several online personality tests. The personalist test from 123test.com uses the 'Big Five' test which states it's the most scientifically validated model [1]. The results from this test concluded that the Author is an introvert. This coincided but also contradicted the results from other sources. Upon further investigation it was found that splitting up the test into Public and Private tests. For example completing a test as if the person were in public with unknown people and unknown surroundings and then completing the same test as if the person were in a private setting with people they knew well. This concluded that the Author is a Public introvert but a Private Extravert which some call Ambiverts. "Ambiverts have introverted and extroverted traits, but neither trait is dominant." [2]

2.2 Presentation Screengrabs

2.2.1 Screengrab 1 showing slide 3.

Peter Evans

- * I'm 31
- * Mid Wales
- * Married 2 Kids



2.2.2 Screengrab 2 showing slide 4 (not shown in slide is a video which loads before moving onto next slide)

Work - Life

- * Hywel Dda University Health Board
- * 14 Years in total
- * 10 Years in IT



GIG
CYMRU
NHS
WALES

Bwrdd Iechyd Prifysgol
Hywel Dda
University Health Board

- * HM Coastguard – Rescue Operator
- * 7 Years



- * Previous Work

2.2.3 Screengrab 3 showing slide 5

Hobbies

- * Digital Projectionist
- * Tropical Marine Fish
- * Scuba Diving
- * Mountain Biking
- * Hinterland TV Series

A collage of three images: a yellow mountain bike parked outdoors, a scuba diver underwater, and a red theater interior with a large screen.

2.2.4 Screengrab 4 showing slide 8

Where do I want to be in 5-10 years time?

WORK – Continued professional Development

- Cyber Security threats on the increase
- Gap in the market – skills.

Where was I 5 years ago?

- Reflecting
- Did I get to where I wanted?

Two images: a person climbing a tree and a digital screen displaying 'Cybersecurity' with various icons.

2.3 Reflection on Presentation

2.3.2 Planning and Creating Key points

- Use a simple template with simple or no transitions. This makes the presentation look more professional and clean.
- Use a Colour wheel to pick contrasting colours which work well together. Take into account the audience which may have colour blind or other visual impairments.
- Limit the text per slide and use large clear font.
- Make use of media such as pictures and videos to keep the audience engaged.

2.3.3 Delivering the Presentation

- **Practise** makes perfect. Rehearsing the presentation alone or in front of people you feel comfortable with. They will offer their feedback which can improve the end result.
- Talk to the audience. Make eye contact and deliver the presentation to the audience. Refrain from looking and reading off the screen.
- Confidence. Taking a breath before starting and have confidence.

2.4 Feedback and Improvement

After the successful completion of the presentation feedback was given. The feedback came from both the lecturer and from the audience. The timing of the presentation was just over 6 minutes which was slightly over the time limit of 5 minutes.

Confidence was the main feedback topic. The presenter came across nervous. This is partly due to the personality of the presenter which is mentioned in point 2.1 above. Public introverts can have a nervous disposition in public speaking especially in front of a large or unfamiliar audience. Improvement will come as the present does more presentations and becomes accustomed to standing in front of an audience.

3.0 Research into Skills Evaluation

This section covers core attributes that employers look for when recruiting people. Employability skills can be broken down into 2 categories, 'hard' and 'soft' skills. Hard skills are regarded as experience or qualifications whereas soft skills represent the candidate's personality which goes beyond the qualifications, more on this below in section 3.2. Sub sections below include details of key skills and how they impact job applications.

3.1 Key Skills for Higher Education Learning

The views in this section come from the perspective of a part time learner with a full-time job and family. The views of other learners particularly those in full time education will probably differ.

- Time Management. The skill or ability to manage a finite resource. Allocating time to tasks for work and studying but also not forgetting to spend time with family and friends.
- Organisation. Takes on board time management and then scheduling in advance. Creating a plan of what needs to be done and by when, prioritising and. More details on this in section 6, Organisation and time management.

3.2 Skills the Employers look for

Mason [3] and author from [skillsyouneed.com](https://www.skillsyouneed.com) [4] both agree that the most important skills that employers seek are the following:-

- Good communication skills. Being able to communicate clearly, adapting to your audience, persuasion, negotiation and motivation are all strengths that derive from this attribute. Communication can be in the form of verbal or written which is often why employers ask for applications forms but also follow up with an interview.
- Team work, leadership and interpersonal skills. Different careers may require different personality traits although most of them will require interpersonal skills which ties in partially with good communication skills. Being part of a team, working along side other teams or even leading a team is often required in any career.
- Self-Management ties into what mentioned above in section 3.1. Time management, organisation and self-management are required for any career. Being on time, making efficient use of time and managing the work load are all important traits.

3.3 Self Evaluation

Personality tests can be used to identify character traits. The author conducted various online tests to determine his personality. Section 2.1 above highlights that the author is a public introvert and private extrovert which are also known as Ambiverts [2].

The image below from [humanmetrics.com](https://www.humanmetrics.com) [5] is the result form one of the tests taken. The results show INTJ, even though this personality implies introversion over extroversion the details imply self-confidence which contradicts what the author thought, however as explained above introversion is expressed privately compared to being in public. The author agrees with the statement Thinking over Feeling, this again shows the traits of an introvert.

INTJ

Introvert(25%) iNtuitive(9%) Thinking(50%) Judging(16%)

- You have moderate preference of Introversion over Extraversion (25%)
- You have slight preference of Intuition over Sensing (9%)
- You have moderate preference of Thinking over Feeling (50%)
- You have slight preference of Judging over Perceiving (16%)

The website humanmetrics.com [5] also suggested possible career paths. It listed mostly technical roles such as Computer Science, Engineering, Mechanical and Military. This coincides with the career path the author is and has taken, from being in the Military to working in the I.T. sector and relating to hobbies such as rallying/amateur mechanics.

Self-Evaluation that was provided as part of the Academic and Employability skills module is attached as Appendix 4. The test showed that the author strengths were in time management, IT skills and organisation. Weaknesses were revealed as self-confidence in public speaking, and most text-based requirements, i.e. writing in own words, reading complicated text and reporting on it. This is partially due to mild dyslexia.

The findings of the personality test along with the self-evaluation support what the author had suggested in his presentation. The feedback from the presentation supports that the author lacks public speaking confidence however the presentation was well organised and informational. The author had a clear plan for short and long term goals.

4.0 Action Plans

4.1 Goals

Goals are a set of tasks or objectives that a person sets to improve and develop their personal and professional knowledge and skills. It is often best practise to write down where or what you want to accomplish in the future and then work backwards to find out how to get there. These can be short term or long term goals and generally a long term goal is constructed from many short term goals.

4.1.1 Short & Long Term Goals

The author defines short term goals as any aim under 1 year. Long term goals are generally 2 – 5 years.

Short Term	Long Term
Learn to use Adobe Premiere Pro to improve Content creation for Cinema.	Complete UWTSD Cyber Security Degree
Take online class in Web Development (Java, Python, CSS) – Personal Interest.	Career in Cyber Security / Advanced Networks
Complete OIC Training with Coastguard	Further Develop Youtube Channel
Complete Joint Operation Planning and Execution Course (Coastguard)	Take Kids to Disney World Florida
Complete UWTSD Assignment for ACCA4016	
Complete UWTSD Assignment for ACCA4018	
Revise for UWTSD Exam ACCB4013	

4.2 Short Term Goal Action Plan

The Action plans completed by the author follow the SMART Guideline.

S – Specific

M – Measurable

A – Achievable

R – Realistic

T – Time Based

Specific tasks have been created, with a WHAT and definition. Each task is measureable by defining the HOW it will be completed. Achievable is covered again by the HOW but the intended process of how you complete a task. Creating a plan in the first instances should highlight if the goals or tasks are achievable and therefore realistic. Adding a time limit to each task gives it a deadline so that it won't drag out, it also creates a goal to reach. The SMART approach works for both Short and Long term goals. Many short term goals can be completed to achieve a long term goal, for example, completing many University Modules will eventually lead to the completed Degree. Macleod expands on the SMART goals further by introducing 'Engaging' and 'Rewarding' [6]. Engaging won't always apply to personal goals, however it may be worth considering for goals that encompass other people or organisations. Getting them on board with goals can be an achievement or short term goal in itself. Rewarding is added to SMART to create a reward for completing tasks which make up

the larger goal. For example, after completing a task on time, the reward could be watching an episode of your favourite TV program.

4.2.1 Content Creation - Short Term Action Plan

Below is an example of one of the actions plans for a short term goal. The goal is to learn a new piece of software and the techniques that go with it. The software in this case is Adobe's Premiere Pro CC. The plan is to learn and use the software before creating a simple video and uploading it to YouTube.

Content Creation using Premiere Pro
Short Term Action Plan

Subject	Type of Assessment	Activities	Date/Duration	Description	Complete By
Adobe Premiere Pro	Online Activities	Construct Plan	27 th Dec	Create a learning plan and set goals/achievements	27 th Dec
		Download Software	27 th Dec	Download Premiere Pro and After Effects from Adobe and install	27 th Dec
		Background Research	28 th Dec	Gather research material on how to use Premiere Pro, UI layout and tips and tricks.	30 th Dec
		YouTube	28 th Dec	Follow prominent Youtubers to learn designs and techniques.	30 th Dec
		UI Familiarisation	28 th Dec	Play around with Premiere Layouts and UI for familiarisation.	30 th Dec
		Setup Project Folder with test media	30 th Dec	Create a project folder to organise media.	30 th Dec
		Create Video	31 st Dec	Create first video on Premier pro	7 th Jan
		Audio Licencing	7 th Jan	Research into Royalty Free and non-copyright audio.	10 th Jan
		Upload First Video	11 th Jan	Upload completed Video to youtube	11 th Jan
		Evaluation	12 th Jan	Evaluation and feedback gathering.	15 th Jan

4.2.2 Cyber Security / Advanced Networks Career – Long Term Action Plan

This action plan is a long-term goal. The goal is to develop the necessary skills and knowledge to continually develop professionally and personally. The action plan consists of many smaller goals with time limits. The goals are flexible in that they can be completed before the deadline and the order of completion isn't critical.

Cyber Security Career

Long Term Action Plan

Subject	Type of Assessment	Activities	Date/Duration	Description	Complete By
Cyber Security / Advanced Networks Career	Planning	Create a Plan for a long-term goal.	5 th April 2018 – 1 day	Create a Plan in word as guideline to what needs to be accomplished.	Completed Guide
	Research	Online research and gaining advice from manager & colleagues	6 th April 2018 – 1 week	What is needed for a career in Cyber Security? What qualifications, what experience?	Gain enough information and knowledge to make a start
	Qualification	Degree in applied Cyber Security UWTSD	Oct 2018 – 4 years	Complete the Degree with UWTSD	Gaining the Degree
	Qualification	CCNA	May 2018 – 6 Months	Cisco CCNA, join Netacad distance learning.	Gaining the qualification
	Experience	Work Place Shadowing	Sept 2018 – 2 days a week for 6 months	Shadow a colleague in current work place who is a Senior Network Architect.	
	Experience	Managers Passport	Late 2019 – 6 days	Hywel Dda Managers Passport course. Provided to employees who require management experience.	Certificate at the end of course
	Self-Taught Activity	Penetration Testing	Dec 2018 – 1 year	Take a course in Kali Linux penetration testing to learn what tools are available.	Self assessment , put the skills learnt into practise
	Registration	Register with professional body	Feb 2019 – 1 day	Register with ISSA UK professional body	Gain membership
	Personal Development	Re-write CV, update with new details	Sept 2020 – 1 week	Update CV and profile to include new qualifications and tailor to Cyber Security career.	Complete CV
	Career Enquiries	Approach companies with CV	Oct 2020 -	Enquire into Cyber Security careers.	

5.0 Data – Backup Plan

5.1 Backup, Recovery and Accessibility

When designing a backup solution, the person must also take into account accessibility and recovery. Without each of the subjects having a process in place then the whole structure fails.

This is the current extensive backup, recovery and accessibility system setup at authors home. There are a few reasons for this.

1. Author has fallen foul of hard drive failures in the past and is fully aware of the risk hardware poses to digital data.
2. Has experienced first-hand ransomware, however not personally been affected by it.
3. Maintains personal data for family but also some local businesses.

5.1.1. Accessibility.

The image below (image 5.1.1.1) shows the connection from the internet into the home network. There are 2 Connections to the internet, main line is FTTP and a second copper telephone link. These are setup as failover, if the FTTP line goes down the copper takes over although at a slower speed.

NGINX load balancer points to the main server where all the live web server and data is stored. Any crucial data i.e. web sites/services are copied across to the Secondary server. If Main server link goes down or the server itself fails, email and phone alerts allow for a manual failover to the secondary server. Websites will only suffer a short downtime. All devices are running on a 1-hour UPS in case of power cuts.

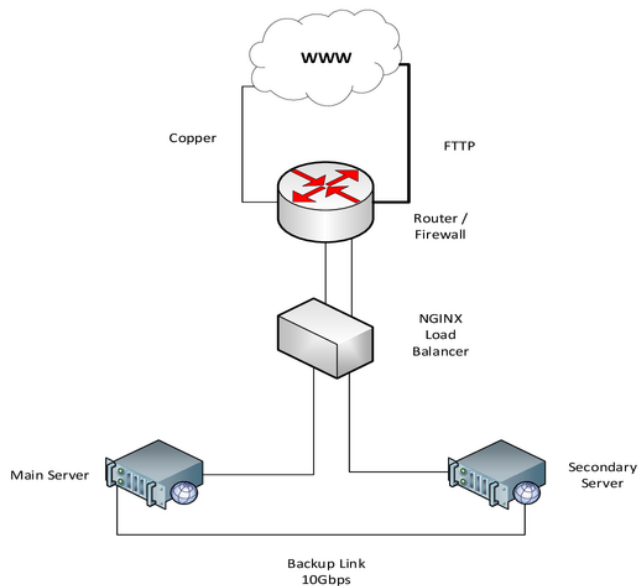


image 5.1.1.1

5.1.2. Backup.

The Main Server above is where all the household and business data is held. Current backup setup and schedule is as follows.

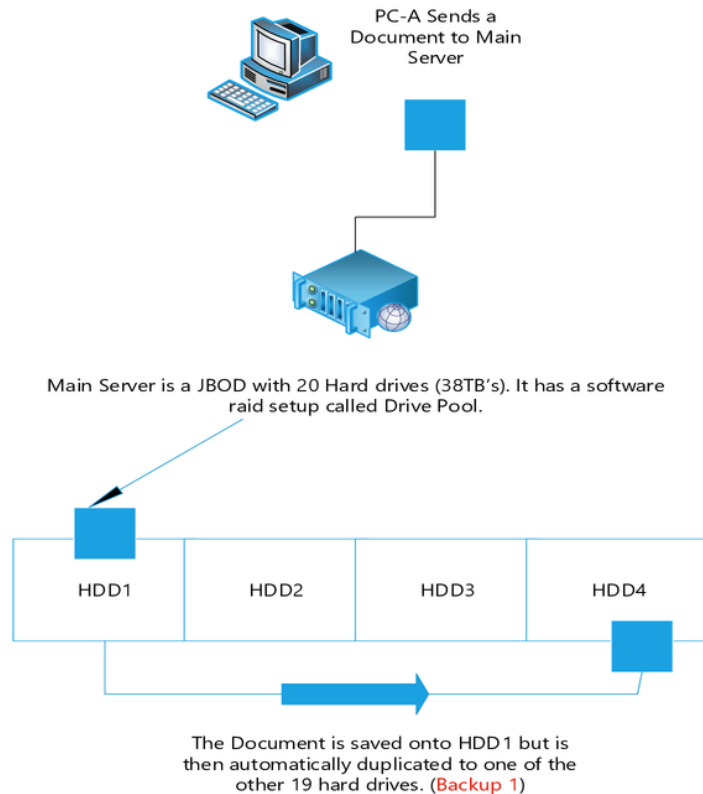


image 5.1.2.1

Crucial data and services running on the Main server are automatically copied across to the secondary server. This is done when a folder that is being monitored by the backup software is modified, the backup then runs for that particular folder. There is a direct 10Gbps fibre link between the 2 servers. This is a one-way backup, it is a manual process to send files from Secondary to Main server (Backup 2).

Image below (image 5.1.2.2) shows the backup of the Main server. OS drive is Snapshotted once a week and sent to an external hard drive that is stored in a fire safe. Important irreplaceable data i.e. pictures, documents and web services details are also snapshotted encrypted and stored on external hard drive (Backup 3). The reason behind using an external device for backups stems from the days of using tape drives. Research shows that because they are offline this offers better protection from widespread ransomware or malware attacks [7].

Image below (image 5.1.2.2) also shows that irreplaceable documents, pictures and music are uploaded to Google Cloud Services. Previously used a dedicated backup cloud solution called backblaze which is subscription based (Backup 4).

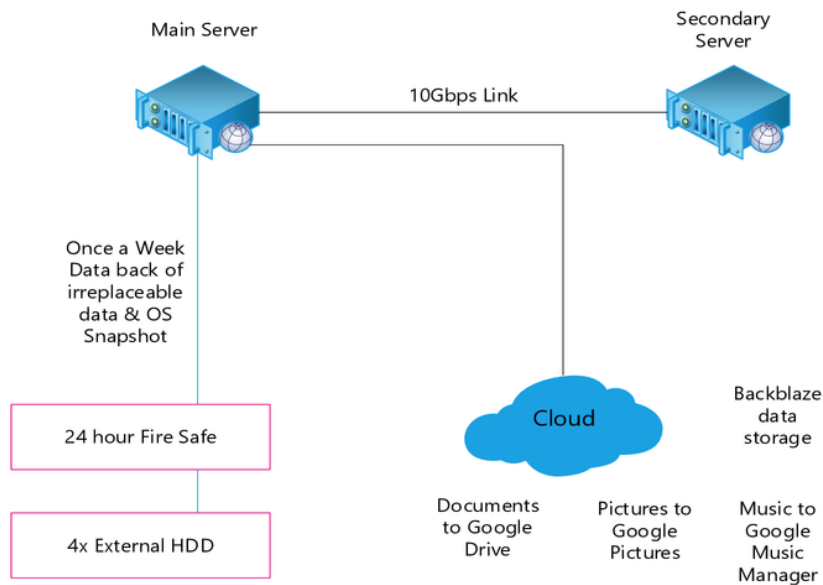


image 5.1.2.2

5.1.3. Data recovery.

Mentioned briefly above in 5.1.1 that if one of the external internet lines fails the other takes over. It's the same for the Servers. If the main server goes down the Secondary will take over although only the crucial services are maintained.

The fourth backup is cloud based, if recovery is needed from the cloud it is limited by speed of the connection. For large data backup, i.e. TB's in size that are uploaded to backblaze, they offer a service where they send out a hard drive with your data on. This still amounts to a delay in recovering data, however posting a hard drive with TB's of data on may be quicker than restoring data over an Internet link.

5.1.3.1. Hard Drive Failure

If a hard drive fails on the main server, services will be unaffected as data is duplicated to other drives but an email alert will be sent to the administrator. If 2 or more drives fail, some data will be lost. In this scenario a restore from either the secondary server or external hard drives where weekly backups are stored on will be necessary. This can be done very quickly as the links between devices are speedy.

5.1.3.2. Fire/Flood/Theft

Combining Fire, Flood and Theft into one category as each of them pose the same type of risk to your data. Referring back to image 5.1.2.2, crucial data is backed up to external hard drives which are stored in a fire rated safe. The rating is 24 hours. This means anything inside the safe should be protected for 24 hours in the event of a fire. The safe is also water tight which limits flood/water damage. And finally, it is a heavy safe secured to a wall which limits the risk of theft. In the event of a theft, if the main server and secondary servers are stolen then insurance would cover the hardware and the data stored in the safe provides the

data protection. The cloud backup would also be a option to recover from. It also has the added benefit of being an off-site backup.

5.1.3.3. Electricity Issues

Problems with incoming electricity supply can be mitigated using a battery backup system for short periods of time and having a petrol generator for prolonged periods of time. Currently there is a UPS installed providing 1 hours' worth of power in case of supply issues. For long periods a petrol generator is available.

5.1.3.4. Ransomware Viruses.

Ransomware poses huge threat to your data. To limit the threat the author researched the subject and came across a report from SonicWall [8] which advises the use of a number approaches to protect the network and individual systems. The first line defence is an IPS/IDS device. This acts similar to a firewall where it scans all incoming data packets and compares them to a database of known viruses, ransomware and any other nasties. If it detects one it immediately blocks that packet and alerts the administrator, it also offers a country blacklisting and whitelisting feature, this is currently used to whitelist only the country of residence. Second line defence is covered by an anti-virus product that offers ransomware protection. Microsoft Security centre offers this feature as does Sophos Home Premium. It works by monitoring files, if a program attempts to alter the files or a number of files it blocks the write and modify access.

Crypto wall is a type of ransomware. This particular ransomware enters a system usually by a phishing email. It then encrypts your data, spreads over the local network and encrypts data on any thing else it can find. The report produced by Evans [9] briefly describes the threat ransomware poses to personal data but also steps to take to limit the risk such as, patching and security updates, using anti-virus software and anti-ransomware software.

5.1.3.5. The Administrator and the Users.

An area often overlooked in a complex network or backup regime is what would happen if the administrator vanished, became ill or was unable to manage the process. It would have to be passed onto somebody else, this could be a family member or business partner who aren't as tech savvy or know the schedule. In the authors household the family members wouldn't know what to do in the event of data lose, the same can be said for the proprietors of the local businesses. In this scenario the author created detailed documentation on network design, hardware, software as well as the backup schedule and recovery processes with user accounts to access each. The documents are stored in the fire safe with the external hard drives. Although not fool proof, some technical knowledge will be required in the event of data lose and in this case outside help will have to be sought.

5.1.3.6. Accidental Deletion.

User error, deleting or data corruption. Backup solution 1 or image 5.1.2.1 wouldn't protect the data from accidental deletion. Once the file is deleted from 1 HDD, it will also be deleted from the second HDD. Backup option 2 would protect from accidental deletion as the file will automatically be copied from the main server to the secondary server. The short comings of this would be if the original file is corrupted this would also corrupt the file on the secondary server. To recover from corruption the file will have to be restored from the external backup. The issue with the external backup is that it can be up to 24 hours out of date.

Terms and acronyms used above

FTTP – Fibre to the Property (Fibre to the Home)

JBOD – Just a bunch of drives – i.e. no hardware raid.

NGINX – A software based Web Server. - <https://www.nginx.com/>

UPS – Uninterruptible Power Supply – A battery backup for a mains powered device

HDD – Hard Disk Drive – A type of data storage media

Backblaze – Cloud based data storage company - <https://www.backblaze.com/>

TB – Terabytes – Size of data.

IPS/IDS – Intrusion Prevention System and Intrusion Detection System.

5.2. Data Backup Conclusion

No data backup is completely fool proof. Limiting the ‘what if’s’ is what the author attempted to do with the regime described above. Many different worst-case scenarios are defined with appropriate recovery procedures while keeping maximum availability for all users to their data.

6. Time Management

Affective time management skills have a correlation between academic achievements and life satisfaction which is suggested by a report from Richiteanu-Nastase [10]. Below is an outline on time management and organisational skills which have been adopted to enhance productivity both within University and at work which will help alleviate stress.

6.1. Organisation

There are many different techniques to improve on self-organisation. The two mentioned below are techniques that the author uses on a daily basis to stay focused, organised and to limit or cope with stress.

6.1.1. Calendar Blocking

Calendar blocking is the art of scheduling work, life and everything else day by day by blocking off times in a calendar. For this the author uses Google Calendar because its easy to use, works across many devices and syncs with other people’s calendars. Below is an extract from the calendar.

Using colours to identify different tasks. For example, blue is main employment related items, red is identified as the Cinema work, yellow for Coastguard and purple is personal blocks. The calendar is also shared with family members and work colleagues. The blocking for coming days is scheduled at least 2 days before hand with most items being filled in the week before. This process provides prior planning and gives structure to the day which improves productivity. Crutsinger [11] says that time management is a process of setting

objectives or tasks while estimating time consumption. This is shown by calendar blocking in image 6.1.1.1.

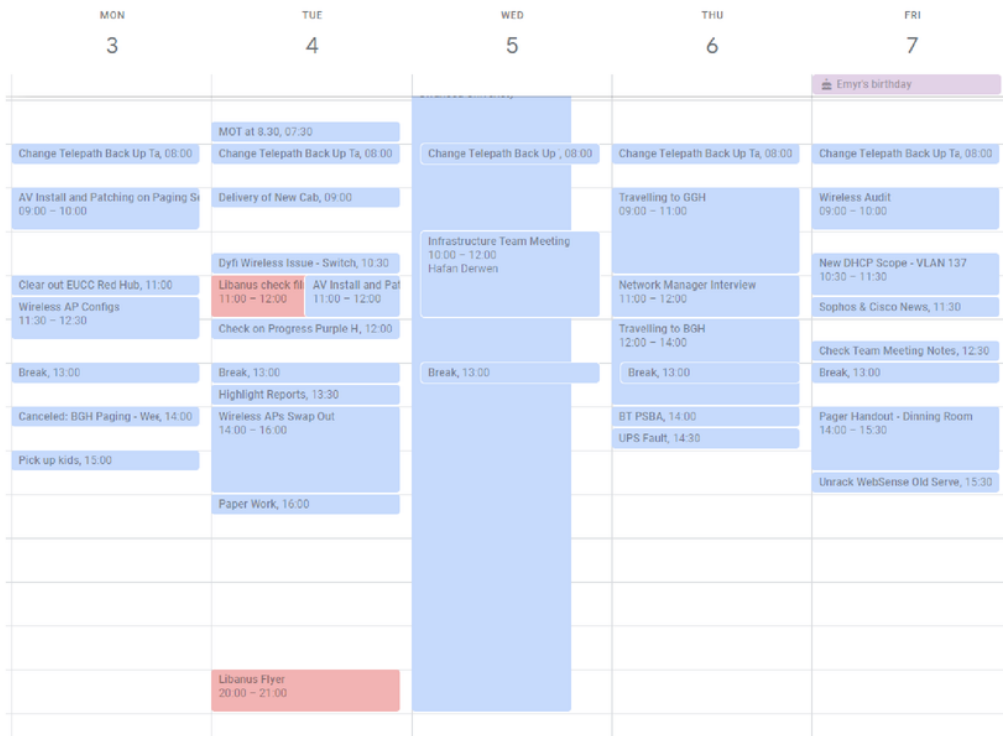


Image 6.1.1.1

6.1.2 Taking Control of your Surroundings

Taking control of your surrounds can summaries a number of techniques into one category.

Keeping your work area clean and tidy – this can include your studying area, office or even your home. Having a clean and tidy area to work means there will be less distractions.

Organising any items that you need and having them to hand rather than having to spend time searching for what you need will improve productivity and reduce stress. And equally important is putting the items away after use so that you know they will be there next time you need them.

Carrying on from the above point, finding an area to study where you are less likely to be interrupted whether by family members, friends or work colleagues. Having your own space is important for concentration and to limit distractions.

6.1.3 Reducing Stress Levels or Coping

Stress is a feeling of being under abnormal pressure [12]. Coping or reducing stress can be as simple as taking control. Organising and taking control of your life whether saying No or working smarter by prioritising and organising work will help reduce or alleviate stress. Stress can be caused by a number of factors from work commitments, finance, family or education. Developing time-management skills and organisation techniques can help balance your life.

6.2 e-Portfolio and PDP

6.2.1 e-Portfolio

An e-Portfolio creates a professional digital footprint. Keeping the contents up to date and organised demonstrates what has been accomplished as well as future aims and goals. Another benefit is that an organised structure offers expandability for when new folders or files need to be added but also provides a simple process to backup (all files are in one place).

6.2.2 e-Portfolio structure

Below in image 6.2.2.1 is the structure of the authors e-Portfolio folders and files. Files are stored on a local server and encrypted copies are also stored on Google Drive in the cloud.

According to Flesishman cloud services offer convenience... but they also introduce significant risks [13]. Even though cloud storage providers attempt to keep data secure the weakest link is usually the user or the single password access. Encrypting personal data offers another level of security and peace of mind. An e-Portfolio can be compared to your identity and therefore securing it online is highly important.

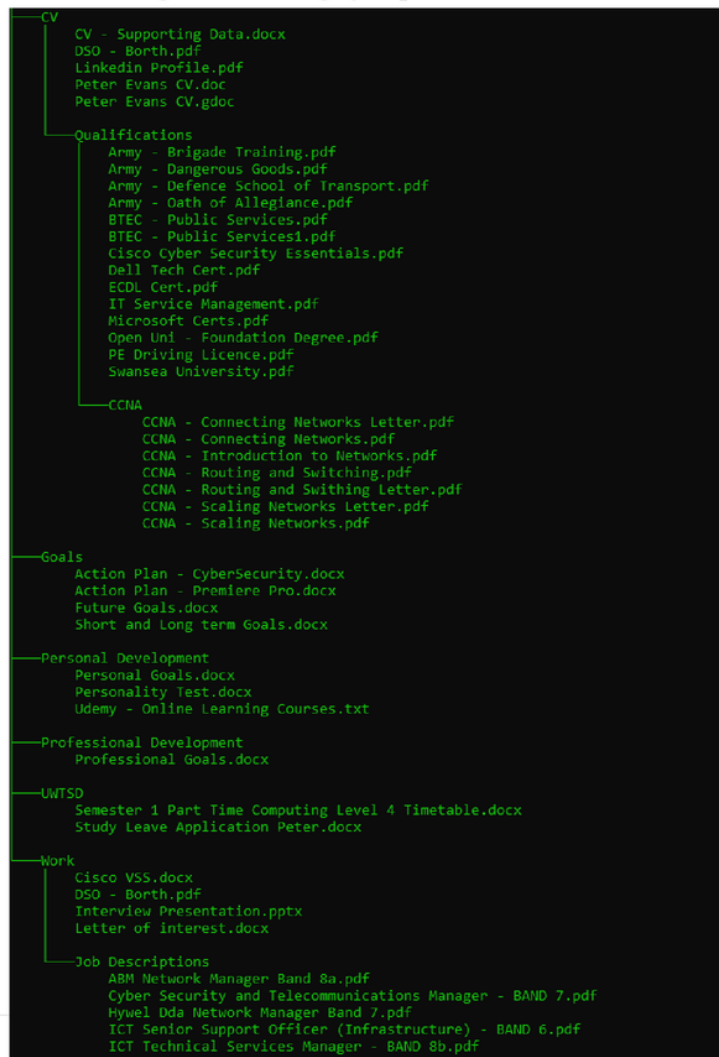


Image 6.2.2.1

- CV folder contains an up-to-date CV in both word and google docs format with supporting info to be attached to the CV. Also contains LinkedIn PDF profile. These are kept together as they would normally be updated together or sent as a package to a prospecting employer. A sub folder containing key qualifications and achievements.
- Goals folder contains an overview of the authors goals along with action plans on how to meet those goals. Once completed they move to the Personal or Professional Development folders.
- Personal Development contains folders and files of achievements completed.
- Professional Development contains files relating to work-based achievements, continued professional development
- UWTSD folder contains documents relating to the current higher education courses the author is attending. Once completed these will move to the qualifications folder and personal development folder to prepare for the next endeavour.
- Work folder contains specific documentation relating to the authors current career. For example, it contains Job descriptions relating to current employment and possible future careers.

A LinkedIn profile is attached as Appendix 3.

7. Summary

This report provides details of what the author learnt throughout the Academic and Employability skills module attended at the University of Wales Trinity Saint Davids in Swansea. Categorising his personality supported what the author thought about his traits. Researching the findings showed what that means to his employment and how it fits with his future career. The module developed the skills to plan for the future by creating action plans which also further developed his personal and professional e-portfolio. Along with this development the author also improved his self-organisation by researching new techniques and improving upon current techniques. All the information gathered assisted the author to complete this report but will also assist further higher education learning and career development.

8. References

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9. Appendices

Appendix 1 – Skills Evaluation

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. Confident to try new things		
2. Motivated		
3. Able to reflect, evaluate and learn from experiences		
4. Excellent note keeping, organisational skills		
What I need to work on, develop or improve		
1. Reading complicated text and ingesting the information		
2. Delivering presentations & talking to crowds		
3. Writing in my own words		
My Priorities: What I am going to do, When and How		
What?	When?	How?
1. Reading and ingesting complicated text	April 2019. New technical documents and researching job opportunities.	Highlight important and key words, research the information further. Drinking Coffee!! [1]
2. Delivering Presentations	Delivering training in work - Jan 2019 and ongoing. Presenting reports to execs – March 2019 and ongoing	Prepare and deliver more presentations, starting with smaller audiences and expanding as the confidence develops.

		Know the audience, Prepare the Room, Preparation, [2]
3. Writing in my own words	As part of the writing Assignments for University and writing reports for Work – Jan 2019	Continue to write assignments and reports, learn by doing and repetition. Take evaluation courses provided online [3]

How will I measure if I have improved?

1. Reading and assimilating new data. Being able to reproduce it for reports, assignments etc. Drink more coffee
2. Create evaluation questions to be handed out after presentations. Practise presentations with a small group first and get their feedback.
3. Getting assignments back from lecturers.

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Appendix 2 – Cryptowall Trojan Report

Cryptowall Trojan/Ransomware

By Peter Evans

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Contents Page

1. Introduction

This report provides an overview of the threat that ransomware, trojans, and virus pose to this business. It will cover the basics of each threat before focusing on the CryptoWall Trojan. The report will cover the scope and risks this threat pertains to digital data with information on how the Trojan can infect a system, how it spreads and what happens when a system is infected. The report will also cover preventative recommendations and disaster recovery solutions.

2. Trojans & Ransomware

There are many categories of malware or malicious software out there. This report will cover 2 categories which CryptoWall falls under. Trojans and ransomware are types of malware designed to infect a system. The reasons can vary depending on the type, its developer or person using the software. Ransomware, for example, is mainly for financial gain as the title suggests it holds the data of the target to ransom/hostage [1]. There are also sub-categories which will be briefly mentioned below in section 3 in relation to Cryptowall. However more broadly malware is designed to damage, disrupt, steal, or in general inflict some other "bad" or illegitimate action on data, hosts, or networks. [2]

2.1 Trojan

The trojan can enter the system via legitimate methods such as email, USB devices or disguised as trusted software. The user of the system is often unaware that that trojan has granted access to the attacker [3]. The Trojan can silently perform actions on the infected system such as stealing data or downloading and installing other categories of malware such as ransomware or virus'. Trojans are unable to self-replicate or spread on their own. [2]

2.2 Ransomware

Is malicious software that blocks access to data by encrypting the data or the hard drive and demanding a form of payment to unlock the data [2]. The user is often unaware the ransomware is encrypting their data until its too late.

3. CryptoWall

3.1 Introduction

CryptoWall is malware which can infect computer systems. It is a Trojan which originates from a phishing email (spam), compromised sites, malicious adverts or exploit kits which take advantage of security vulnerabilities. Once the Trojan takes control of the system it then encrypts files before demanding a payment usually in bitcoin* to decrypt the files. The files are encrypted with 2048-bit RSA method and the files will be inaccessible.

*Bitcoin is a crypto or digital currency which is used by attackers due to it being very difficult to trace the payment to an identity. [4]

3.2 How it infects.

CryptoWall can enter a system in a number of ways. Each entry point requires user intervention before it infects the system.

- Phishing email – this is an email that can look legitimate to the end user. The user opens the email and either clicks a link or downloads an attachment which then installs the trojan.
- Exploit kit – this is a tool which takes advantage of security weaknesses in operating systems or programs installed on the machine. Once the vulnerability is found the trojan installs itself of the machine.
- Malicious Ads – pop up adverts or adverts embedded into web pages can be infected with the trojan, clicking the ad can often install the trojan onto the machine, usually using javascript.

3.3 What does it affect?

Once the trojan has access to the end device it then injects its own malicious code into the system which allows itself to download, install and run the malware.

CryptoWall searches for certain file types, see appendix 1. Once it finds the file it will silently encrypt them without alerting the user. Once the encryption has finished the user is alerted that their files are now inaccessible until a payment is made.

4. Solution

4.1 Limiting the risk

To limit the risk of encountering CryptoWall or other ransomware malware [5].

- Educate employees on what phishing emails look like.
- Patching security vulnerabilities.
- Keeping Antivirus up-to-date.
- Firewalls and IPS, updating and maintaining firewalls and intrusion prevention systems.
- Access and privileges rights to systems.
- Maintaining backups and having multiple backups.

4.2 Backups and Recovery

The most effective way to mitigate the threat of ransomware is backups. Having a backup process in place and creating a routine. Creating local backups and using third party companies such as Back Blaze can offer offsite cloud backup solutions. If a machine is infected with ransomware, formatting

the system and re-installing the operating system and then recovering data is the simplest option [6]. Keeping a structured backup system where multiple copies are kept in different locations is also recommended.

5. Conclusion

This report outlines the potential problems that malware poses to the organisation. A brief description of the type of malware that CryptoWall is and recommendations to limit the risks. The report also includes a disaster recovery recommendation which can be used if the worst was to happen.

Appendix

Appendix 1 [7]

 FILETYPES VULNERABLE TO CRYPTOWALL ENCRYPTION			
.XSL Excel Spreadsheet	.PDF Portable Document Format	.GIF Graphical Interchange Format File	.ASS Angisub 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 AvaBook eBook	.RM RealMedia File
			

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Further Reading

Trojans and their sub-categories <https://www.kaspersky.co.uk/resource-center/threats/trojans>

Appendix 3 – LinkedIn Profile

Contact

crazypete00@hotmail.com

www.linkedin.com/in/peter-evans-75a169104 (LinkedIn)

Languages

English

Welsh

Certifications

Microsoft Exchange Server 2003

MCDST

ITIL Foundation

Introduction to Cyber Security

Peter Evans

Deputy Station Office at HM Coastguard
Aberystwyth, Ceredigion, United Kingdom

Summary

Keen interest in Networks and Cyber Security, skills include Cisco Networks and telecoms, Desktop Technical support both first and second line. Experienced in Health care systems. Infrastructure support. Basic pentesting knowledge of wireless security. Methodical and very hands-on, enjoys problem-solving. Always looking to further my technical knowledge and expertise.

Experience

Hywel Dda University Health Board
Infrastructure Technician
July 2018 - Present
Aberystwyth

Hywel Dda University Health Board
IT Desktop Technician
February 2008 - Present
Bronglais General Hospital

Maritime and Coastguard Agency
Deputy Station Office
December 2018 - Present
Borth

Maritime and Coastguard Agency
Coastguard Rescue Operator
2012 - Present
Cambrian Sector

Search & Rescue, Cliff Operator, Mud Technician, Water Rescue, First Aid.

British Army
Royal Welsh Infantry
February 2009 - August 2012 (3 years 7 months)
B Company

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Appendix 4 – Self Evaluation

Self Evaluation of Academic Skills

Thinking about yourself, read and mark each statement out of 5, with 5 being 'Totally Agree' and 1 being 'Totally Disagree'. If a statement doesn't apply to you, leave it blank

Skill	 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

Appendix 5 – Vision

You:

- What you truly Love & Enjoy?
 - Peace and quiet
- What you enjoy doing?
 - Gaming
 - Mountain Biking
 - Travelling
- What kind of person do you want to be?
 - Reliable
 - Dependable
 -
- With your family?
 - Fun
 - Energetic
 - Role Model
 - Provider
- With your friends?
 - Entertaining
 - Dependable
- at work?
 - Successful, Decision maker.

Your Profession:

- What you would truly love to do as a Career?
 - Cyber Security Consultant
- What would be your Dream job?
 - Cyber Security Consultant
- How could you achieve it?
 - Completing courses in Cyber Security
 - Gaining experience working in Cyber Security field
 - Research into companies working in the sector and what they want
- How would you feel doing that job?
 - Not sure
- What would be your daily activities?
 - Combating cyber criminals.
- What would you love most about your job?
 -

Your Life:

- What would your ideal life be like? consider what different aspects of your life would be like?
 - Wining the lottery 😊
- What would you love most about your life?
 - Being able to spend more time with the family
 - Living to work rather than working to live

10. Further Reading

Bibliography

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REFLECTION ON ACADEMIC AND EMPLOYABILITY SKILLS REPORT

GRADEMARK REPORT

FINAL GRADE

GENERAL COMMENTS

Instructor

80/100

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GRADING FORM: GJ_2019

PETER EVANS

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ENGAGEMENT WITH LITERATURE



Excellent use of research sources extending beyond simply using the links provided in the AES moodle content. Good use of citations within the main body of text.

78

KNOWLEDGE AND UNDERSTANDING



Excellent level of understanding demonstrated, with all required areas covered.

85

COGNITIVE AND INTELLECTUAL



Excellent level of personal analysis applied to the gathered information, with all required areas covered and extending beyond simply presenting the data obtained.

80

PRACTICAL APPLICATION



Good evidence to show that all the various aspects have been attempted

80

TRANSFERABLE SKILLS



Generally well laid out and presented. Good use of formatting and breaking the report down into sensible nested numbered sections that follow the numbering convention detailed in class. Good writing style. Reads well with a good 'flow'. One or two spelling mistakes. Also, try to keep the font

75

consistent (in size). Some of the indenting is a little inconsistent as well. I have to find SOMETHING wrong don't I :-) Good work.