

Tyler Karpowicz's Home - REDACTED VERSION

About Me (Tyler Karpowicz)

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My Accomplishments at Raytheon BBN

Evaluate-STIG

- Thoroughly Read Through Provided User Guide
- Tested the Functionality of Evaluate-STIG on a Proposal Laptop
- Created a Windows 10 SHB Virtual Machine on Virtual Box to Extensively Test the Functionality, and Features of Evaluate-STIG
 - Created, and Utilized, AnswerFiles to Increase Efficiency with Regards to Hardening Devices
- **Created a Guide and Documentation on Collab for Evaluate-STIG and Evaluate-STIG AnswerFiles**
 - What Evaluate-STIG is, How to Get Evaluate-STIG, as well as How to Use Evaluate-STIG
 - What are Evaluate-STIG AnswerFiles, Important Guidelines for Making an Evaluate-STIG AnswerFile, How to Make an Evaluate-STIG AnswerFile, How to Use an Evaluate-STIG AnswerFile, as well as an Evaluate-STIG AnswerFile Word Bank
 - **[Link REDACTED For Security Purposes]**
- **Gave a Live Presentation and Demonstration on Evaluate-STIG for BBN-BI-Staff**
 - **Evaluate-STIG Demo - Monday 4/3/2023 10:30am-11:30am**

PowerShell 7 Guide & Documentation

- Completed the PowerShell 7 Essential Training on LinkedIn Learning, and took details notes throughout the training.
 - [PowerShell 7 Essential Training - LinkedIn Learning](#)
- Created the "PowerShell 7 Guide & Documentation" Collab Page.
 - **[Link REDACTED For Security Purposes]**
- Created the "PowerShell 7 Guide & Documentation" based on:
 - My notes from the training
 - PowerShell concepts that I have learned throughout my time at BBN
 - Concepts that I learned after the training
 - Common PowerShell use-cases, focus-areas where I've made PowerShell Scripts for at BBN
 - Various other commands, concepts, and syntax that I have found to be useful or essential when it comes to working with PowerShell 7.
- My goal with creating this documentation, was to make the process of learning how to work with PowerShell 7, whether it is just commands or even scripting, as easy and straight-forward as possible.
 - When I talked to my co-workers at BBN, I found that the major limiting factor when it comes to learning PowerShell, is the amount of time and content involved with learning PowerShell 7.
 - I structured my documentation with this concept in mind.
 - To streamline the process of learning PowerShell 7, I organized the pages of the documentation to start from the most basic (installing PowerShell 7), to the most complicated (creating PowerShell 7 Scripts for specific use cases).
 - Therefore, if someone just wanted to learn how to use commands in PowerShell 7, just wanted to learn how to make scripts in PowerShell 7, or wanted to learn a great deal about both they could.
- Massive thank you to Curtis for providing me with essential feedback, meaningful suggestions, and guiding me on formatting adjustments for this documentation!

Collab Documentation

- Evaluate-STIG Guide & Documentation
- Setting-Up A Local Repository in Red Hat Linux
- How to Install STIG Viewer 2.17 on Red Hat Enterprise Linux (RHEL)
- Standalone GPO Backup & Import Guide/Documentation
- Examine-AD-membership.ps1 Guide & Documentation
- How to Install PowerShell 7 on Red Hat Enterprise Linux (RHEL)
- PowerShell 7 Guide & Documentation
- How to Increase/Extend the Ubuntu Server LVM Volume with LUKS (VMWare)

My Resume



My Transcript

In-Progress Collab Documentation

- Tenable Nessus Guide & Documentation
- Standalone GPO Backup & Import Guide/Documentation
- How to Setup A Local Imaging Server

Bitbucket PowerShell Scripts

- Examine-AD-membership.ps1
 - This script checks the group membership of every member of the "-bd-trac" groups, and checks if they are a member of either one of the NON-US or US groups.
 - This script will reveal which users are not a member of their respective NON-US or US group, and output these findings to the terminal, and organized Excel file.
- CreateFileStructure.ps1
 - This script creates the base folder structure for standalone secure systems.
 - This script can be run on a standalone machine to near instantly create the "C:\Admin" folder, and all its associated, organized, shell folders.
 - Options can be supplied for the current "Quarter" and "Year", making the script future-proof.
- Windows10ADScrape.ps1
 - Worked with fellow interns to develop a script that outputs the Windows Version of devices which have been logged into, based on an input value of days.
 - This script outputs a list for the "Name", "LastLogonDate", "OperatingSystem", and "Version", for all of the associated devices.
 - This list is first sorted by "LastLogonDate", and then sorted by Windows "Version".
 - The script also outputs a count for how many computers are using a certain version of Windows at the end.

Learning (Outside of Workday Trainings)

- Atlassian Tools Tour
- Intro to Slurm
- Tour of Bolt
- EHSS Orientation Checklist
- BSP GPO / Symantec Setup
- Learned about the Process and Procedures associated with Network Mapping
- RTX CSS Lunch & Learn - Evaluate - STIG Overview and Demonstration
- Confluence Macros
- BBN BI Orientation
- Fitness Orientation

Seminars & Information Sessions

- Seminar: "Pizza with ChatGPT or: How I Learned to Stop Worrying and Love the Bot."
- Risk Management Framework(RMF) Continuous Monitoring Plan and Strategy Discussion
- Synthetic Biology SDP Seminar: Unlocking the Hidden World of Scent with Canaery
- Government Property Compliance Seminar
- Fun with GPT3: Writing Code
- SDP Networks Seminar: Transmit Beamforming Over Acoustic Channels: Is Space Division Multiple Access the Next Goal?
- Overview of Commercial Solutions for Classified (CSfC)
- Large Language Models: Fundamentals and Perspectives
- Revolutionizing Internet Communication: An Introduction to the QUIC Transport Layer Protocol
- Expediting Digital Design - GSD University Brown Bag Series
- REX Design Lessons Learned - GSD University Brown Bag Series
- Design for Manufacturing and Assembly - GSD University Brown Bag Series
- Technology & Global Engineering - Town Hall Meeting
- Agile Program Execution - GSD University Brown Bag Series
- Tech Talk - DEFCON Recap
- DFMA/S - GSD University Brown Bag Series
- Generative Design and Analysis of AM Structures, Divergent3d Tour Summary - GSD University Brown Bag Series
- Interview Candidate [REDACTED For Security Purposes] Tech Talk
- Career Development - A Mid Career Perspective - GSD University Brown Bag Series
- Overview of PhantomStrike Radar - GSD University Brown Bag Series
- Intellectual Property – Publications and Invention Disclosures - GSD University Brown Bag Series
- Halloween Malware Spooktacular Lunch & Learn (Inner-Workings of Ransomware, and the Group Behind it)
- Her Story: [REDACTED For Security Purposes] (BBN BD) discusses surviving a deadly cancer and gives tips for survivors & supporters
- Advanced Microelectronics Packaging - GSD University Brown Bag Series

Academic T

My Spring 2023 Co-Op Presentation



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My Fall 2023 Co-Op Presentation

- FPGA Design Lessons Learned - GSD University Brown Bag Series
- 2023 Fellow Process Info Session #2

Line of Business Briefings

- Analytics and Machine Intelligence (AMI)
- Quantum Engineering and Computing
- Information Exploitation, Advanced Systems, and Maritime
- Networking and Cyber Technologies: Advanced Networking

RTX ASPIRES Lunch & Tour

- Malaysia
- Japan

Meetings to Learn about Roles Across BBN and Raytheon Intelligence & Space

- Met with [REDACTED For Security Purposes] to learn about Cybersecurity at BBN
- Met with [REDACTED For Security Purposes] to learn about the ISSO Role
- Intern Meet and Greet with [REDACTED For Security Purposes], BBN CIO

Reoccurring Meetings Attended

- BBN All Hands - CAM
- Weekly BBN BI-All Staff Meeting
- Bi-Weekly BI Closed Area SA's Meeting
- Proposal Laptop Tracking
- Bi-Weekly Check-In with Peter Stickney
- ClosedRoom PS Review
- SAPTS Rebuild

Completed HELP Tickets on JIRA

- Setup Windows Administrative Tools / Remote Server Admin Tools
- Explore BI Documentation
- Explore IPAM Documentation
- Test out PXE Booting
 - Worked with [REDACTED For Security Purposes] to Test out PXE Booting a Laptop in the 5th Floor Build Room.
- Script to Examine AD Group Membership
- Script to find what releases of Windows 10 people are using
- Figure out how to increase LVM volume with LUKS

In-Progress HELP Tickets on JIRA

- None

Hardening Client Laptops

- Utilized Evaluate-STIG, and Evaluate-STIG AnswerFiles, to Expedite the Hardening Process
- Utilized the DISA STIG GPO Package
- Utilized Arun's GPO Package
- Installed and Utilized SCAP Compliance Checker & STIG Viewer
 - MS_Edge
 - Windows Firewall
 - Windows 10
 - Adobe Acrobat Reader Continuous DC
 - Microsoft Word 2016
 - Microsoft PowerPoint 2016
 - Microsoft Excel 2016
- Installed Drivers
- Installed Requested Programs
- Performed Symantec Anti-Virus Scans (Full and Active Scans)
- Created the Auditors Group and Configured File Permissions
- Installed, Configured, and Setup Tenable Nessus on One of the Laptops



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Examine-AD-membership.ps1

- Originally Julian's Task
 - He created the base code for the PowerShell 7 Script.
 - I helped him create the base foundation for the Collab Page.
- Examine-AD-membership.ps1 Guide & Documentation
 - Helped Julian create the base foundation for the Collab Page.
 - Added to, Adjusted, and Completed Documentation for the Examine-AD-membership.ps1 script.
- BitBucket - Examine-AD-membership.ps1
 - Added "ForEach-Object -Parallel" functionality, to drastically increase the script's efficiency (3x-5x Faster!).
 - Robert helped with enabling the AD SamAccountName output to appear at the end of the script.
 - He fixed this, by changing the "ForEach-Object -Parallel" loops to Object [Array] Script Blocks.
 - Added to, Adjusted, and Completed the Examine-AD-membership.ps1 script.
 - Robert helped a ton with fixing the Excel file output, and fixing the "NULL" output error.
 - He fixed this by adding a "\$MaxIndexCount" variable, and by adding "Out-Null" to the Non-Object-Array inputs.
- Script to Examine AD Group Membership
 - Jira Ticket originally assigned to Julian, I took over this ticket after his internship concluded.
 - Added Comments and Progress Updates to the Ticket
 - Shared multiple versions of the code
 - Explained changes/improvements for each code update
 - Made note of known bugs
 - Made note of fixed bugs
 - Completed the "Script to Examine AD Group Membership" Jira Ticket.
- Massive thank you to Robert for helping me with a variety of different subject areas and concepts, when it came to making this PowerShell Script!

Maker Space

- Obtain Clearance for Maker Space
- Completed all necessary trainings associated with it
 - Machine Shop Safety- CR-SL-EHS1003
 - Personal Protective Equipment - CR-EHSPPEWB
 - Toxic Metals Awareness - CR-EHSMETALSWB
 - Hazardous Waste Awareness - CR-EHSRCRA01
 - Hazard Communication - CR-EHSHAZCOMGHS01-3YR
- Created an Account for Eiger, to Utilize the 3D-Printers
- 3D-Printed an ID-Badge-Holder Model from Thingiverse
 - badge-holder-updated-3.zip
- Learned and Utilized Blender to Edit Thingiverse .STL File, to fix Dimension Issues
- 3D-Printed 4 Copies of the Blender-Corrected ID-Badge-Holder .STL File

Build Room

- Learned how to Keep Track Company Assets (Asset Tags and Hard Drive Serial Numbers)
- Setting Up Build Room Servers
 - Installed SCAP Compliance Checker and STIG Viewer
 - Installed Active Directory
- Utilized Active Directory to Make a New User Account & Install Necessary Tools (Tools in VM)
- Conducted SCAP Scans on a Server
- Utilized STIG Viewer to Harden a Server

Platform One

- Researched and Reviewed Documentation on the Platform One Website
- Communicated Questions and Concerns about Platform One with Sys Admin Collogues
- Collected a Variety of Thoughts, Questions, and Concerns, and Reached out to a Platform One Reseller

SAPTS Rebuild

- SAPTS - Create VHOST and Member Servers
 - Created Hyper-V Virtual Machines on a Virtual Host Server (Windows Server 2019)

- SAPTS - Adding Devices to Domain
 - Added the Virtual Host, DC02, Splunk, Symantec, Ivanti, and Nessus to the Domain
- SAPTS - CISCO Switch Configuration
 - Configured the CISCO Switch to work with both Physical Servers and the Virtual Machines inside the Virtual Host

Workday Trainings

- Labor Reporting & Compliance - GBSFIN104WB
- General Awareness of U.S. and European Export Controls - CEI003WB
- RTime Time Reporting for Employees - GBSFIN101WB
- Cyber Security Awareness (Ethics Compliance Education Center) - ECEC: SAIG-EXis01aRTX
- Machine Shop Safety- CR-SL-EHS1003
- Personal Protective Equipment - CR-EHSPPEWB
- Toxic Metals Awareness - CR-EHSMETALSWB
- Hazardous Waste Awareness - CR-EHSRCRA01
- Hazard Communication - CR-EHSHAZCOMGHS01-3YR
- RTXConnections Social Access Requirement - ENT-RCS101
- Security and Privacy Awareness - RTXSEC2023WB
- Workplace Violence Prevention and Awareness - RTXSECWVPA2023WB_ENG
- Speak Up: The Right Choice (Ethics Compliance Education Center) - SAIG-AArc19aRTX
- Dignity and Respect in the Global Workplace (Comprehensive) (Ethics Compliance Education Center) - SAIG-CXsh12aRTX
- The Ethics of TINA Compliance (Ethics Compliance Education Center) - SAIG-AAti01aRTX
- PowerShell 7 Essential Training (LinkedIn Learning) - <https://www.linkedin.com/learning/powershell-7-essential-training/get-up-and-running-with-powershell-7?u=75110562>
 - Workday Link: **[Link REDACTED For Security Purposes]**
- Act with Integrity 2023 (Ethics Compliance Education Center) - RTX-ETHICS2023-01

Other Accomplishments

- Completed Orientation Checklist
- Created Goals on Workday
- Setup my CISCO Desk Phone for Voicemails
- Performed Extensive Research and Communication, with regards to Platform One as a Potential Service for BBN
- BI CAM Spring Co-Op Presentation
- Attended a Raytheon BBN Intern Event in Cambridge, to Meet Summer Interns from a Variety of Different Locations Across Greater Raytheon
- Attended CAM BI Intern End of Summer Presentations
- Removed Hard Drives and Batteries from E-Waste Laptops on the 5th Floor
- Fitness Center Waiver
- Taught Fellow Interns about STIG Viewer and Evaluate-STIG, as well as How to Use it
- Setup Ivanti on Standalone Laptop, for Vulnerability Testing
- Helped with Installing and Wiring a GPU Server
- Setup BSP Replica Lab/Network with fellow Interns and Mike (To Test Veeam Backup Functionality)

My Current Tasks and Goals

Goal	Methodology	Comments	Status
Create Documentation on Useful PowerShell Commands and How to Create PowerShell Scripts on Collab	<ul style="list-style-type: none"> • I will take specific step-by-step notes of the LinkedIn PowerShell 7 Essential Training in my Notebook. <ul style="list-style-type: none"> ◦ https://www.linkedin.com/learning/powershell-7-essential-training/retrieve-data?resume=false&u=75110562 • I will organize these notes into a more concise format for Collab Documentation <ul style="list-style-type: none"> ◦ There will be either two separate Collab Pages for Useful PowerShell Commands and PowerShell Scripts, or there will be one PowerShell Essentials Page with Multiple Different Sub-Pages. • I will thoroughly test out the documentation for bot the Useful PowerShell Commands, and the Guides on how to make Simplified, and Complex, PowerShell Scripts. 	<ul style="list-style-type: none"> • I have already taken Step-By-Step Notes of the LinkedIn PowerShell 7 Essential Training in my Notebook. • Still need to Finish taking Notes for the LinkedIn PowerShell 7 Essential Training in my Notebook. • I will follow the Useful PowerShell Commands, and How to Create PowerShell Scripts on Collab, Guides to Create PowerShell Scripts on my Work Laptop, and test out the functionality of these Commands and Scripts on Virtual Machines as well. <ul style="list-style-type: none"> ◦ I will also have the other interns test out my guides on Useful PowerShell Commands, and How to Create PowerShell Scripts on Collab. ◦ This will make sure the Guide is Accurate • Still need to Create and Finish this Collab Page • Still need to Publish this Collab Page 	Completed

Create Documentation for How to Set-Up and Configure A Local Imaging Server on Collab	<ul style="list-style-type: none"> I will take specific step-by-step notes for the Process of Setting-Up a Local Imaging Server in my Notebook. I have met with, and will try to continue to meet with Ed to ensure the Local Imaging Server is setup correctly according to the guide, and that the guide matches the use-case for a Setting-Up a Local Imaging Server. I will create a Windows Server 2019 VM on VMWare, to make sure the guide accurately reflects on how to set it up, in these environments. 	<ul style="list-style-type: none"> I have taken specific step-by-step notes for the Process of Setting-Up a Local Imaging Server in my Notebook. I have met with, and will try to continue to meet with Ed to ensure the Local Imaging Server is setup correctly according to the guide, and that the guide matches the use-case for a Setting-Up a Local Imaging Server. I created a Windows Server 2019 VM on VMWare, to make sure the guide accurately reflects on how to set it up, in these environments. Still need to Follow this Guide on the Following Platforms, to make sure the guide is accurate. <ul style="list-style-type: none"> Fresh Windows Server 2019 VM on VMWare Windows 10 / Windows 10 SHB Local Machine <ul style="list-style-type: none"> For both Backing-Up the Device, and Deploying a Machine Image onto the Device Still need to Finish this Collab Page Still need to Publish this Collab Page 	In-Progress
Helping Julian With a PowerShell Script to Examine Active Directory Memberships "Examine-AD-Memberships.ps1", and Create Documentation on Collab for it as well, "Examine-AD-Membership.ps1 Guide & Documentation"	<p>Using Visual Studio Code to Edit "Examine-AD-Membership.ps1"</p> <ul style="list-style-type: none"> Using PowerShell 7 Using "ForEach-Object -Parallel" <ul style="list-style-type: none"> To Run Processes in a Multi-Threaded form, to Drastically Increase Efficiency Using Microsoft Excel to Output the File Contents to Using Active Directory to Obtain Members, and Associated Groups Primary Goal: Find out Which Users Do Not Belong to "[REDACTED For Security Purposes]" or "[REDACTED For Security Purposes]", to assign users to the proper group they belong to. Groups: "[REDACTED For Security Purposes]", "[REDACTED For Security Purposes]", "[REDACTED For Security Purposes]", and "[REDACTED For Security Purposes]" 	<p>Examine-AD-Membership.ps1</p> <ul style="list-style-type: none"> The Core Functionality of the PowerShell 7 Script, "Examine-AD-Membership.ps1", works as intended, and it works about 3 times faster than the original version, thanks to "ForEach-Object -Parallel" The Excel Output is Broken, and the Excel Output File has blank fields for where the AD Members should be. The Excel File Output Target Directory has been fixed, so it will work universally, but it puts the file in the parent folder. <ul style="list-style-type: none"> This could cause issues for people that use the script, which have the PowerShell Script File too Close to their Root Directory. <p>Examine-AD-Membership.ps1 Guide & Documentation</p> <ul style="list-style-type: none"> The framework for the Collab Documentation has been laid out. The latest version of "Examine-AD-Membership.ps1" still needs to be uploaded to Bitbucket. Finalization, and Finishing Touches for the Collab Guide and Documentation will be conducted after the PowerShell Script has been fixed, tested, and finalized. 	Completed
[Collab-JIRA] [REDACTED For Security Purposes] PowerShell Script to Examine GPO Permissions	<ul style="list-style-type: none"> Look at Josh's VPN PowerShell Script for Reference <ul style="list-style-type: none"> This will give me a good idea of how PowerShell code should be written (i.e. formatting, syntax) Look at Microsoft's Database for PowerShell commands and options Read through, and follow Tutorials Point PowerShell tutorial 	<p>Installed Visual Studio Code</p> <ul style="list-style-type: none"> Created Test PowerShell Script <p>Installed VirtualBox</p> <ul style="list-style-type: none"> Created Windows Server 2019 VM to test scripts on 	Completed
[Collab-JIRA] [REDACTED For Security Purposes] Examine OVAL Content, Scans and Results	Research how OVAL Content from SCAP Scans should look, when they are in a readable format.	<p>Downloaded STIG Library</p> <ul style="list-style-type: none"> https://public.cyber.mil/stigs/compilations/ <p>Downloaded OVALRepo</p> <ul style="list-style-type: none"> https://github.com/CISecurity/OVALRepo <p>Downloaded STIG Viewer</p> <ul style="list-style-type: none"> https://public.cyber.mil/stigs/srg-stig-tools/ <p>Downloaded SCAP Compliance Checker</p> <ul style="list-style-type: none"> https://public.cyber.mil/stigs/scap/ 	In-Progress

Create Documentation for Nessus Installation & Setup on Collab (Standalone Windows Machines)	<ul style="list-style-type: none"> • I will take specific step-by-step notes of the Installation & Setup Process for Nessus, in my Notebook. • I will test these steps out (documentation), using one of the Proposal Laptops that has not had Nessus Configured yet. 	<ul style="list-style-type: none"> • I have already taken Step-By-Step Notes for the Installation and Setup Process for Nessus in my Notebook. • Still need to Follow this Guide to Setup Nessus on one of the Proposal Laptops <ul style="list-style-type: none"> ◦ This will make sure the Guide is Accurate • Still need to Finish this Collab Page • Still need to Publish this Collab Page 	In-Progress
SAPTS Rebuild	<ul style="list-style-type: none"> • Bi-Weekly Meeting every other Tuesday 11:00am-11:30am • SAPTS Consists of Two Servers in the Build Room on the 5th Floor <ul style="list-style-type: none"> ◦ One Server: Domain Controller (DC) (Top Server) ◦ Second Server: Virtual Machine Host (VHOST) (Bottom Server) <ul style="list-style-type: none"> ▪ DC02 ▪ Splunk ▪ Symantec ▪ Ivanti ▪ Nessus • Need to Communicate with other Secure System Administrators to See who will take over this project, since Arun left 	<p>Notes: Still need to setup and configure Windows Server 2019 on DC02, Splunk, Symantec, Ivanti, Nessus</p> <p><u>Completed</u></p> <ul style="list-style-type: none"> • SAPTS Create VHOST and Member Servers <ul style="list-style-type: none"> ◦ Created Hyper-V Virtual Machines on a Virtual Host Server (Windows Server 2019) <ul style="list-style-type: none"> ▪ DC02 ▪ Splunk ▪ Symantec ▪ Ivanti ▪ Nessus • SAPTS - Adding Devices to Domain <ul style="list-style-type: none"> ◦ Adding the Virtual Host, DC02, Splunk, Symantec, Ivanti, and Nessus to the Domain. • SAPTS - Cisco Switch Configuration <ul style="list-style-type: none"> ◦ Setting up and Hardening the Cisco Switch that will be used in this environment. <p><u>Upcoming</u></p>	In-Progress