OPERATIONS & INTELLIGENCE CYBER SECURITY
EXECUTIVE REPORT

Institute of Electrical and Electronics Engineers

May 2018.

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About This Report

The purpose of this document is to report on the "state" of security for your organization. It must be noted that GLESEC bases its information analysis on the services under contract. The information generated by these services is then aggregated, correlated and analyzed. The more complete the set of services under contract the more accurate and complete the results will be.

The report is organized in three parts; the first is the Executive Summary with recommendations (as necessary or applicable), the second is the Intelligence Section with more detail information and analysis dashboards and the last is the Operational Section with status of the services and counter-measures under contract, tickets for change management and incidents reported and consulting activity for the month.

We at GLESEC, believe that information security is a holistic and dynamic process that requires on-going research and follow up and should be handled with the right tools, systems, processes, skilled personnel and focus attention. The process is dynamic due to the constant discovery of new security vulnerabilities and exploits, the proliferation of hacking tools that make it easier for script-kiddies with minimal knowledge to cause damage. The increase in malware, phishing, insider threats, espionage, organized crime, intellectual property theft, and hacktivism are the very cause of information security exposure and are most commonly driven by financial gain. GLESEC's outsourcing services, based on its proprietary TIP™ platform portfolio provide the ideal response to the above.

Confidentiality

GLESEC considers the confidentiality of client's information as a trade secret. The information in this context is classified as:

- Client name and contact information
- System architecture, configuration, access methods and access control
- Security content

All the above information is kept secure to the extent in which GLESEC secures its own confidential information.

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Scope of this Report

GLESEC Contracted Services Table

Type	Service	Contracted?	Service Expiration
Threat Mitigation	MSS-APS		
Threat Mitigation	MSS-APS-SSL		
Threat Mitigation	MSS-APS-PS		
Threat Mitigation	MSS-APFW		
Vulnerability Testing	MSS-VME	YES	06/30/18
Vulnerability Testing	MSS-VMI		
Compliance	MSS-EPS		
Threat Mitigation	MSS-SIEM		
Risk assessment	MSS-BAS	YES	11/30/18
Threat Mitigation	MSS-EIR		
Threat Mitigation	MSS-UTM		
Threat Mitigation	MSS-INT		
Access Control	MSS-TAS		

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Executive Summary

This report corresponds to the period from May, 2018.

The following table describes the major categories that GLESEC has identified to report on the state-of-security of its member-clients. The categories in the table below are based on risk-management methodology. This is a principal foundational aspect of GLESEC.

RISK

Risk management is the ongoing process of identifying, assessing, and responding to risk. To manage risk, organizations should understand the likelihood that an event will occur and the resulting impact. With this information, organizations can determine the acceptable level of risk for delivery of services and can express this as their risk tolerance. The NIST Cyber-Security Framework

One of GLESEC's foundational columns is basing all its activities to support RISK determination and mitigation. What any organization should want to know: what is their level of RISK, and in this case in particular to cyber-security. Cyber-Security RISK has a direct impact to the business and as such is of paramount importance to the Board and Management of the company.

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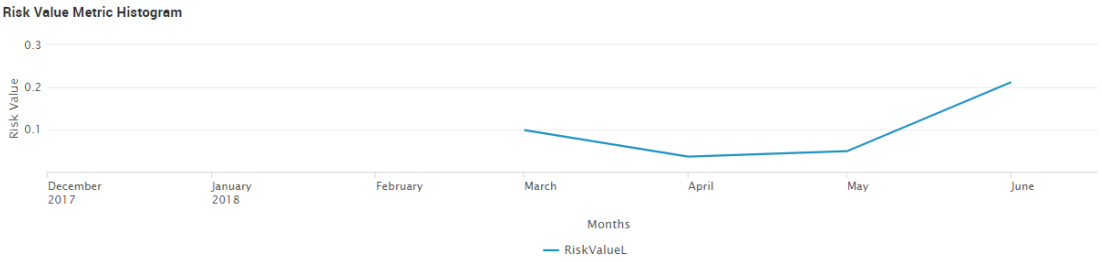
We at GLESEC measure RISK through a number of perspectives and using several of the TIP™ platform portfolio of services. The MSS-VM or Managed Vulnerability Service provides us with one view, how weak are the systems of the organization. The MSS-BAS provides us a view of how weak the defenses of the organization to the latest threats are. The MSS-APS,MSS-SIEM, MSS-UTM, MSS-EIR, MSS-EPS provides us with attack information both internal and external, DDoS, Malware, Ransomware and other attack vector information as well as provide protection level services. The MSS-EPS also provides us RISK level information for non-compliance with internal or external requirements and/or regulations. All in all a variety of services provide us with different views and together we have the most complete view of our client's security posture.

Risk conditions based on the contracted services MSS-VM



For the current month period, the total hosts inspected were 348, the same host number as we arrived at our first scan. In our analysis, the number of vulnerable hosts went from 4 in April, to 101 in this month. The vulnerabilities present in these 101 hosts, is related to Microsoft Windows Server 2003 Unsupported Installation Detection, Microsoft IIS 6.0 Unsupported Version Detection, PHP Unsupported Version Detection, among others.

For this period, critical and high-risk vulnerabilities were found

In conclusion, for this period, there was an increase in the risk level due to the increase of vulnerable hosts found in your systems and high-risk vulnerabilities.

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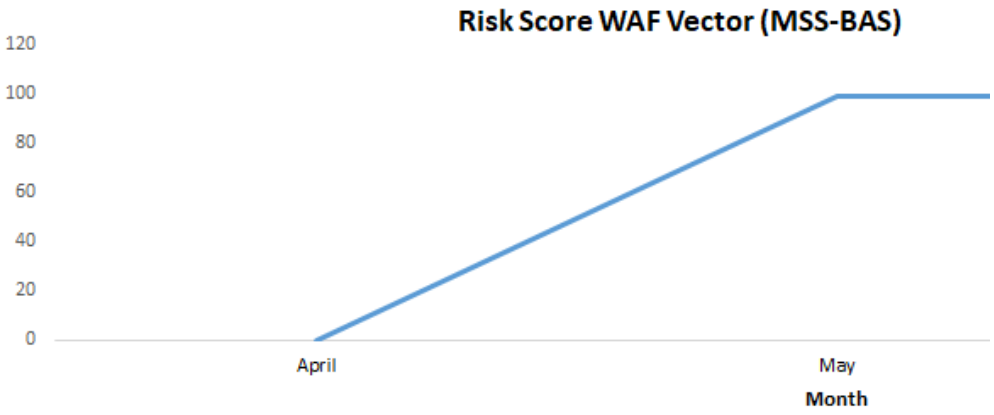
Risk conditions based on the contracted services MSS-BAS e-mail vector is 19%

As seen in the graph above, the risk score for email vector has greatly diminished over the last months.

Risk conditions based on the contracted services MSS-BAS WAF vector is 99%



The histogram shows that 99% of the tests simulated to the WAF vector, surpassed the WAF security policies.

Least Vulnerable to:

ransomware

*i.e: WannaCry, Petya.

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Most Vulnerable To:

links

VULNERABILITIES

Vulnerabilities are weaknesses that if exploited can compromise the organization and as such are a component of RISK for the organization. If there are vulnerabilities and also threats there is RISK that the organization can be impacted. The vulnerabilities reported by GLESEC should be considered all important and addressed according to the priority (Critical, High, Medium and Low). An effective process is to work with the GLESEC provided information and GLESEC consulting team to address the recommendations provided in a systematic and continuous way.

GLESEC's MSS-VM(E/I) service is used to conduct two weekly testing to external and/or internal systems (depending on the options of the contracted service). Of the two tests performed weekly, one is to test for discovery of assets on the network and the other to test for vulnerabilities. The external testing is performed from GLESEC' cloud platform and the internal is conducted with the GLESEC Multi-security Appliance (GMSA). Progress can be determined by weekly testing.

In general, Institute of Electrical and Electronics Engineers vulnerabilities in this period have been Critical(20),High(27),medium(149),low(22); It was discovered that 101 of the 348 hosts analyzed have at least one problem of vulnerability, the vulnerabilities found this month by name are:

- Microsoft Windows Server 2003 Unsupported Installation Detection
- Microsoft IIS 6.0 Unsupported Version Detection
- Oracle GlassFish Server 3.1.2.x < 3.1.2.15 Multiple Vulnerabilities
- PHP Unsupported Version Detection
- PHP XX Multiple Vulnerabilities
- Return Of Bleichenbacher's Oracle Threat (ROBOT) Information Disclosure
- SSL certificate cannot be trusted.
- SSL medium strength cipher suites supported.
- SSL Certificate Signed using Weak Hashing Algorithm.

- SSL Self-signed Certificate

The port considered most vulnerable for this period were 443 (HTTPS) followed 80 (HTTP), 21 (FTP), this is due to the fact that many vulnerabilities were found that are related to them.

Risk Value Metric

GLESEC utilizes a metric to provide a way to quantify the vulnerabilities based risk of an organization. This metric is to measure the relative value of vulnerabilities and also the record of change over time.

It is important to mention that this metric considers a median value for the vulnerabilities classified as "critical", "high", "medium" and "low", giving them a weight of 100%, 75%, 50% and 10% respectively.

This takes into consideration all of the vulnerabilities, but is important to point out that these values (100%, 75%, 50% and 10%) are arbitrarily chosen by us, so this measure can in time change as we understand more of the risks involved. We can use this metric to evaluate the progress in time and to compare one over the other using a common amount set.

The following table indicates the external vulnerability metric.

Total IP's Scanned				IP's Vulnerable
348				101
Risk Distribution				
Critical	High	Medium	Low	Total
20	27	149	22	218

According to the metrics:

RV= 0.155699014

The following values are to clarify RV:

RV=1 Points to every IP address in the infrastructure that are susceptible to attacks

RV=0 Points to no IP address in the infrastructure aret susceptible to attacks

RV=0.1 Point to 1/10 IP address in the infrastructure that are susceptible to attacks

External listing of vulnerabilities by condition:

host-ip	count
140.98.193.52	1
140.98.193.163	3
140.98.193.170	1
140.98.193.235	1
140.98.194.12	4
140.98.194.14	1
140.98.194.15	4
140.98.194.17	4
140.98.194.52	1
140.98.194.56	1
140.98.194.64	1
140.98.194.88	1
140.98.194.90	1
140.98.194.119	1
140.98.194.156	2
140.98.194.160	1
140.98.194.161	1
140.98.194.165	1
140.98.194.192	1
140.98.194.202	1
140.98.194.203	1
140.98.196.36	14
140.98.196.80	8
140.98.196.190	14
140.98.200.11	1
140.98.200.17	7
140.98.200.22	2
140.98.200.27	2
140.98.200.30	10
140.98.200.34	1
140.98.200.35	1
140.98.200.36	1
140.98.200.37	1
140.98.200.73	2
140.98.200.75	2
140.98.200.77	1
140.98.200.83	1
140.98.200.85	1
140.98.200.91	1
140.98.200.93	1
140.98.200.94	1
140.98.200.95	1
140.98.200.96	1
140.98.200.97	1

140.98.200.98	1
140.98.200.103	7
140.98.200.144	1
140.98.200.181	1
140.98.200.215	7
140.98.202.4	5
140.98.202.13	5
140.98.202.35	3
140.98.202.40	3
140.98.202.45	1
140.98.202.47	1
140.98.202.49	2
140.98.202.61	1
140.98.202.89	1
140.98.202.101	1
140.98.202.102	1
140.98.202.103	1
140.98.202.104	1
140.98.202.106	1
140.98.202.114	2
140.98.202.116	1
140.98.202.117	1
140.98.202.121	2
140.98.202.121	2
140.98.202.122	3
140.98.202.131	1
140.98.202.151	4
140.98.202.167	2
140.98.202.173	5
140.98.202.189	5
140.98.202.190	2
140.98.202.197	5
140.98.202.205	1
140.98.202.246	9
140.98.202.252	6
208.99.166.228	2
208.99.166.229	2
208.99.166.234	2
208.99.166.235	3
208.99.166.236	2
208.99.166.240	2
208.99.166.247	2
208.99.166.251	2

Vulnerability Categories

The following table indicates the categories that we use for vulnerabilities as a way to provide context to them and facilitate the prioritization of how to handle remediation.

Preliminary Analysis	Firewalls	Network Devices
SMB/NetBIOS	SSH Servers	Malformed Packets
Simple Network Services	Mail Servers	Proxy Servers
Policy Checks	SQL Servers	Wireless AP
Web Servers	FTP Servers	Webmail Servers
RPC Services	Server Side Scripts	NFS Services

Backdoors	SNMP Services	Printers
Encryption and Authentication	DNS Servers	

Based on the above the following table shows a matrix of the total external vulnerabilities by category.

Category	Critical	High	Medium	Low	Total
General	0	0	96	13	109
Web Servers	13	14	37	4	68
CGI abuses	7	12	6	0	25
FTP	0	1	5	0	6
Misc.	0	0	1	5	6
Service detection	0	0	4	0	4

THREATS

GLESEC uses its MSS-APS, MSS-EPS, MSS-SIEM, MSS-EIR and MSS-UTM to determine threat intelligence activity.

The services that provide us with information for this section have not been contracted.

ASSETS

We believe that we cannot protect what we don't know and to know the assets (systems and applications) is critical to having a sound cyber security practice. Therefore we encourage you to verify the information that we provide and let us know if anything is suspicious or just not right. We can work with your organization to create a baseline that can be used to identify deviations. Please contact our GOC for assistance in this matter.

The MSS-VM(E/I) identify network assets while the MSS-EPS identify applications. Depending on the contracted services is the listing that can be provided of system or application assets. The MSS-VM(E/I), MSS-EPS conduct weekly testing.

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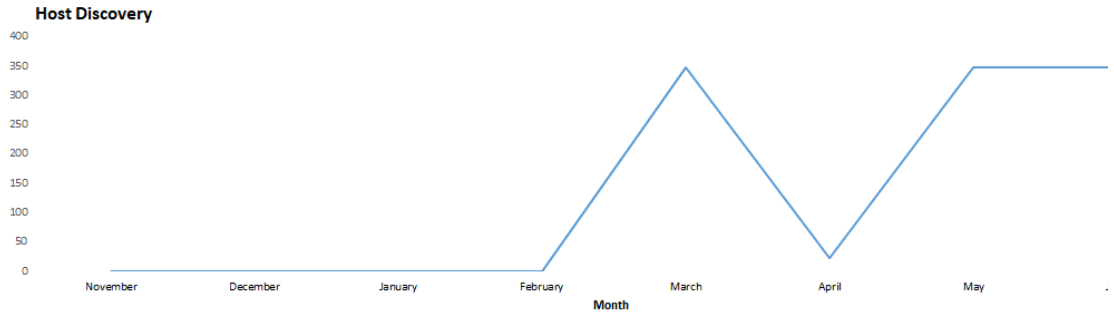

Knowing what's on your network is extremely important. Our monitoring team at our GOC has been keeping track of all these host discovery results and has found nothing unusual.

For this period of the month, we have been able to reach the same 348 hosts that we were able to reach the first time we tested. This means that the access control issue has been corrected.

COMPLIANCE

The MSS-EPS or Managed End Point Security Service is a Compliance and Remediation Service. For compliance we understand the testing, monitoring and alerting of deviations of the parameters of all "hosts" and "servers" in the organization from established baselines. These baselines can be created to support specific outside requirements or internal best-practice guidelines. The MSS-EPS can monitor deviations to these baselines and also "enforce" compliance with these.

The services that provide us with information for this section have not been contracted.

CYBER SECURITY VALIDATION

Security Validation implies the validation of the entire security by conducting testing with simulated attacks. This is conducted with the Managed Breach Attack Simulation Service (MSS-BAS). The MSS-BAS is a collection of advanced pre-exploitation, post- exploitation and awareness testing services. The testing is on real targets based on simulated attacks; therefore these provide conclusive (no false positive) results. The different attack vectors test the organization's configurations, countermeasures, implementations and ability to respond in a continuous fashion

producing valuable intelligence and recommendations.

The MSS-BAS e-mail Vector enables organizations to know different metrics that are used to measure and know your e-mail security position: an "e-mail Security Exposure Level", a "Risk Score" and types and severity of the malware that you are expose to, via the e-mail attack vector.

The e-mail Security Exposure Level can be "Low", "Medium" and "High" and it is based in the "Risk Score" which is a percentage. The Risk Score is a Key Parameter Indicator, KPI, and it is used as an indicator of an increase/decrease from report to report, of how is the "overall" security in your organization. In this case related to the e-mail attack vector.

The Risk Score is calculated based on different parameters like the number of e-mails containing malicious software that are able to penetrate your security and other factors that are taken into consideration based on the type of malware and the "risk" for that malware. For instance for Ransomware, the Risk is calculated evaluating also parameters like number of "double clicks" needed to open the malicious file sent to the organization and the impact for your organization, of this type of malware if it is able to penetrate your security. The "Risk" for each malware is also classified as High Probability, Medium Probability and Low Probability depending in the type and probability of occurrence. For instance, Ransomware has a very high impact to the organization, but there is Low, Medium and High probability Ransomware, depending of the probability of occurrence.

The **"e-mail Security Exposure Level"** for your company this month was classified as "Low" based on the "Risk Score" of 19%.

In the **email simulation** 44 of the different file types, holding a malicious-payload within, were able to penetrate your security measures (See "Files detected as ALLOWED"). This is something that should be of concern to the organization because this means that, as right now, you do not have a proper set of security measures in place that are analyzing, blocking or dropping any e-mails, containing the type of malware that we used in this simulation.

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MSS-BAS e-mail vector Simulation Summary 918/4272

Risk Level	*Sent*	*Penetrated*
High	555	28
Medium	1324	713
Low	2396	177

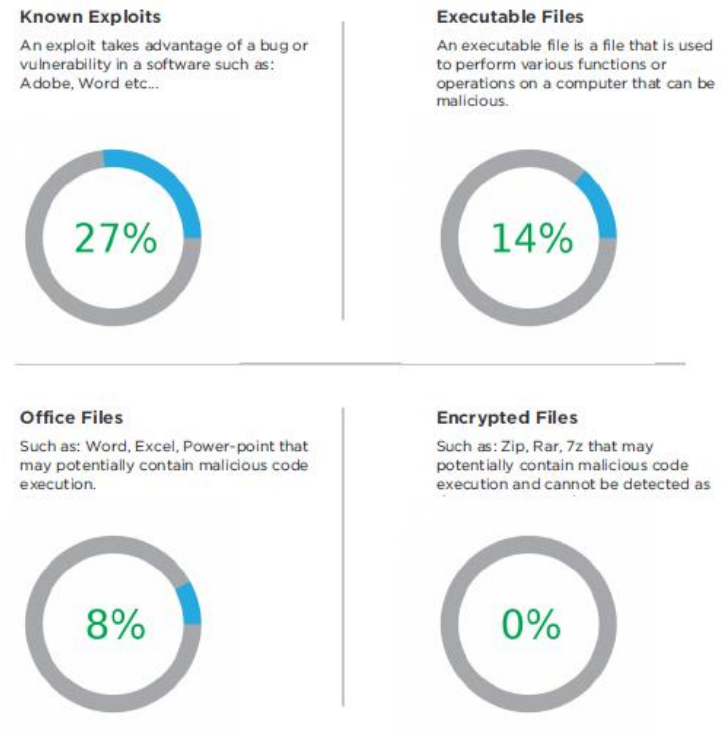
Attack Type	Sent	Penetrated	%
Exploit	150	15	10%
Ransomware	479	25	5%
Malware	1269	73	6%
Worm	466	48	10%
Payload	464	45	10%
Dummy	583	49	8%
Links	861	663	77%

A very important detail that can be observed in the Summary shown above is that the highest percentage penetration for the **email vector** this month comes from links at 77%. Links refers to links contained in emails, used in phishing and spear-phishing attacks, modern phishing, called spear-phishing attacks, are targeted at a particular organization after gathering information of said organization to make it look as valid as possible or spoofing the sender domain to make them look they come from a real company. This Medium risk factor indicates that your organization is very vulnerable via e-mail to these types of attacks. It is difficult to completely

remove this threat vector, but some techniques that help reduce the number of attacks received through this vector are anti-spam filters, anti-phishing solutions with the capability of checking for domain spoofing and implementing DMARC framework to be able to stop any suspicious email from reaching the mail server; personnel training is also advised, there are platforms both free and paid that allow the organization to forge phishing campaigns for internal simulations and tests.

Infected Simulated File types

The following charts show the infected simulated files by filetype, with the percentage of successful infiltrations.



Web Gateway Attack Summary

During this month, the BAS-Browser vector has not been executed, this has been notified to personnel of your organization, for us is very important to run the simulated attacks because this can help to improve the security posture of your

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organization and prevent incidents.

WAF Attack Summary

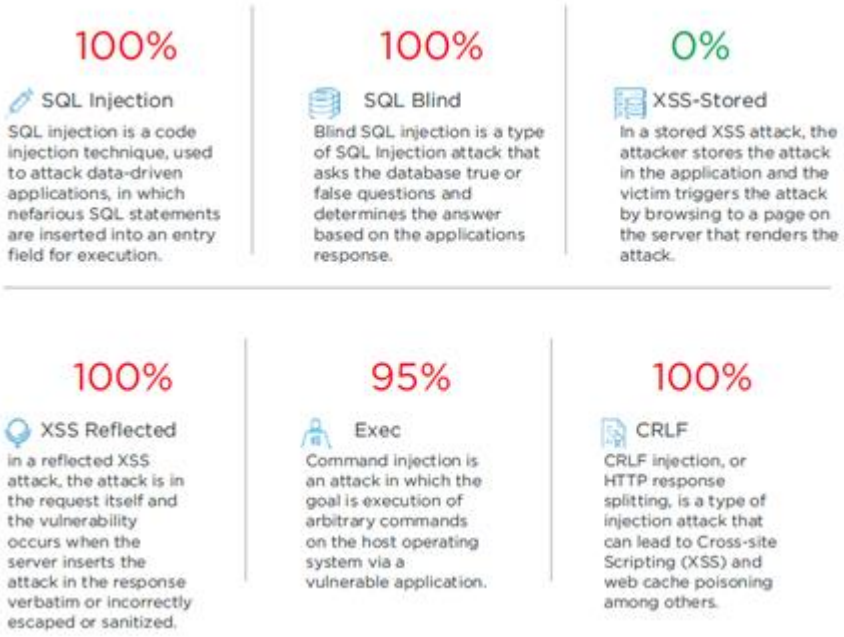
For this month's simulations, the risk score of your organization is considered **high risk**. This situation is of concern and should be addressed as soon as possible; however the fact that the successful simulations percentage was very close to 100%, and with the information we have, could point that there is no countermeasure in place to defend against this vector. The risk score for this month is 99 %, which is considered a high-risk level.

The following table summarizes the successful penetrations by risk level, the table shows clearly that all but two high risk level payloads were able to bypass the security measures in place (see down below, first row) and all others, medium and low risk payloads bypassed the WAF security policies.

Simulation Summary: 332/334

Risk Level	Sent	Penetrated
High	54	52
Medium	112	112
Low	168	168

Assessment Result



The samples used are classified in the categories showed above, along with their successful entries to their target. It is worth noting that there is a 0% percent in the XSS-Stored category, this means that at the very least, the countermeasures tested, scans for fragments of code when a user enters data through the input boxes or forms and sanitize the input data if it finds anything anomalous.

Observations

This report made to an URL of your organization determined that 99% of the simulated attacks of the WAF vector, were successful. It is very important to clarify the following points:

1. We are assuming that the WAF protecting your websites is fully operational.

2. Please check if the URL that was supplied to us: ieee.org is being protected with the Web Application Firewall, WAF.

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TRUSTED ACCESS

The new IT model brings with it a greater attack surface, comprised by employees that use their own devices for work, while working remotely. The proliferation of cloud applications for nearly every business need has also contributed to increased technical complexity. These days, attackers can expose much different vulnerability in multiple vectors — in a single attack. Traditional security is designed to address separate, siloes attacks, making these solutions ineffective against modern threats. These new threats center on gaining remote access to your apps and data — whether it's with stolen passwords or exploited known vulnerabilities targeting your users, their out-of-date devices, cloud applications and remote access software.

The Managed Trusted Access Service (MSS-TAS) is a holistic security service to (a) ensure that the user access is trusted (valid user) and (b) the devices used by the user to authenticate meet the organization's security standards.

The services that provide us with information for this section have not been contracted.

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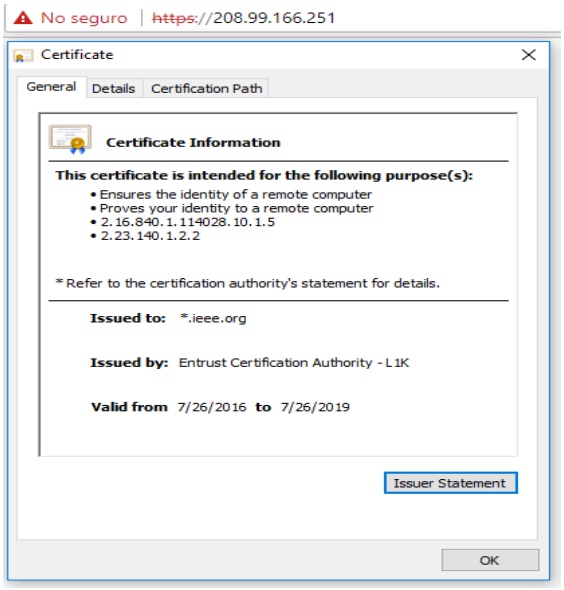
Recommendations

Despite the growing investment in cyber security, sophisticated attackers still manage to bypass even the most advanced security systems, including next-generation, non-signature based security. The reason is that advanced threats are coded to look like legitimate behavior. Therefore, they are extremely difficult to identify using conventional systems and can proceed unimpeded within the target networks.

1. Additional details about these vulnerabilities are presented in the Technical report of Institute of Electrical and Electronics Engineers in severity section of the Managed Vulnerability Service (MSS-VM). Some of the vulnerabilities found in these systems, are related to issues with digital certificates, such as the IP address of the host defined as common name in the certificate.



2. The service MSS-BAS used a group of sample files to simulate the attacks, most of this samples were contained in one or several file types, the following table illustrates which embedded file types were able to successfully infiltrate your network:

To detect malicious file that could be hidden within another file type solutions such as Sandbox/**Content-Disarm & Reconstruct** can be implemented. A Sandbox solution contains the suspicious file in an isolated environment and attempt to execute it in several ways behaving like an end-user, if the payload is triggered, the sandbox can use Content disarm, removing the malicious code embedded in the file and leaving the original file cleansed.

3. Due to the fact that a penetration could have already compromised the internal systems it is recommended to conduct a forensic evaluation of your local network and/or critical systems.

4. It is also important to take a pro-active approach to avoid infection by deployment of technology or contracting a service that can identify an attack without signatures and mitigate this before it causes harm to the organization.

For any question about any of the recommendations above or to request assistance please contact our GOC.

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Intelligence Section

Managed Breach Attack Simulation Service (MSS-BAS) Intelligence Section

The Managed Breach Attack Simulation Service (MSS-BAS) is a collection of advanced pre-exploitation, post- exploitation and awareness testing services. The testing is on real targets based on simulated attacks; therefore these provide conclusive (no false positive) results. The different attack vectors test the organization's configurations, countermeasures, implementations and ability to respond in a continuous fashion producing valuable intelligence and recommendations.

The purpose of this section is to highlight intelligence gathered from this and other services under contract as well as outside sources such honeypots, known malicious sources, vulnerability databases, relationships with CERT and CSIRT teams that GLESEC possesses, together with various other threat feeds.

The following graphs are dashboards generated by GLESEC's TIP™ platform. These dashboards are representative of metrics for this service.

Successful high level simulated attacks

We found 28 threats that have a higher level of impact as a High risk, which are Malware, Worm and Ransomware and dummy.

This malicious code can be hidden within several different file types, the usual security countermeasures do not recognize it or stop it once it has been executed.

The successful penetrations are broken down in the following categories:

- Malware: 17 files that await remote commands from a command and control server or try to obtain elevated privileges by disrupting the user activities with pop-ups.
- Ransomware: 2 files were able to penetrate the perimeter at this level. These are considered as high risk due to the low number of clicks required to execute them and the fact they are using common extensions to disguise

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themselves, so users are more prone to execute them by mistake.

- Worms: 7 files disguised as Office Macros that attempt to spread through the network to infect other computers.

Successful Medium level simulated attacks

Email vector: 713 files within this severity indicator were able to penetrate the perimeter, these are the highlighted categories:

- Ransomware: These files were able to penetrate the perimeter at this level as well, what this means is that using different combinations for containing this malicious code were successful in entering the network. These types are considered medium risk because they require more clicks to be executed, as contained in more different types of files. The ones that were able to access your network were:
    - ICS-VCS-XLK
    - XHTML-ICS-MDB
    - LHA-PDF-ACCDB
    - ARJ-PDF-ACCDB
    - RAR-PDF-ACCDB
    - ZIP-ICS-XLL
    - GZ-PDF-ACCDB
    - VCS-ICS-XLM
    - LZH-PDF-ACCDB
    - MSG-VCS-XLT
    - CAB-PDF-ACCDB
    - TAR-PDF-ACCDB
    - 7z-EML-PDF-ACCDB

This ransomware has the same impact to your Organization if executed as a "High risk" ransomware, but it is little less accessible for the end user.

- Exploit: The files that could enter the network target five different vulnerabilities. The first one aims to instigate a stack overflow attack MSCOMCTL.OCX, this attack targets Microsoft Office 2007 and 2010. The second vulnerability used, makes uses of a Microsoft Word macro to gain access to a power shell command line. The third vulnerability allow remote code execution in older Firefox versions (50.0.1 or lower). The fourth vulnerability uses an undocumented feature in Microsoft Word that allows malicious attackers to collect information about the OS and software versions remotely. The fifth exploit refers to a code injection in CSV files that allow remote code execution
- Worms: files under this category, are run automatically by the Office Macro scans ports and infects other computers in the network.
- Links: files under this category are payloads that redirect to webpages that host malware attempting to download it to the victim's computer.
- Payloads: files under this category, periodically take screenshots of the user's desktop and attempts to read input from the user.

The other types of attacks sent by this simulation were blocked by your Organization security countermeasures.

Successful Low level simulated attacks

177 out of 2396 low risk malicious codes were able to access your network. These types of files are considered of low risk because (a) they require many clicks to execute or (b) even if they were executed they don't cause a high impact. By securing the network against higher severity criteria mentioned before in this report, it is likely that the amount of low risk malware that penetrated is also reduced.

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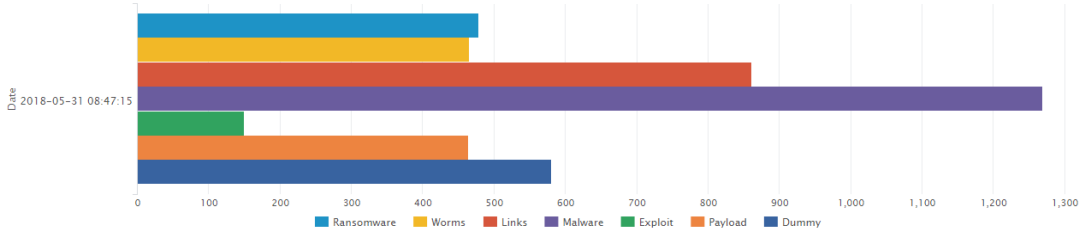
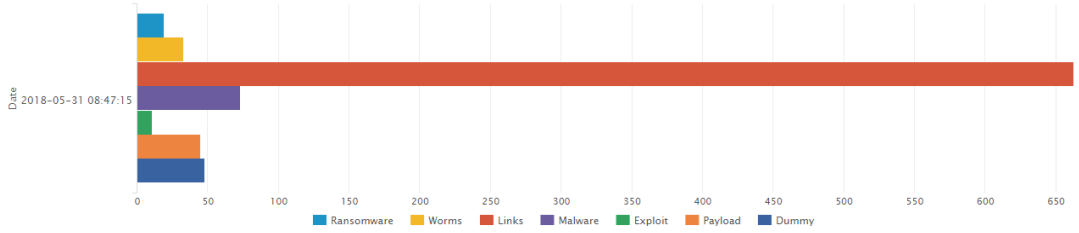
Graph: e-mails Sent

This graph shows a comparison of the malware and Ransomware sent and accepted



Graph: e-mails Penetrated



Graph: e-mail Vector Attack Summary

Here are the number of e-mails containing malware sent during the attack simulation Vs. the ones that penetrated your organization: 479 Ransomware sent, 25 penetrated; 1269 Malware sent, 73 penetrated; 464 Payload sent, 45 penetrated; 150 Exploit sent, 15 penetrated; 466 Worm sent, 48 penetrated; 861 Links sent, 663 penetrated and 583 Dummy sent, 49 penetrated.

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Managed Vulnerability Service (MSS-VM) Intelligence Section

The Managed Vulnerability Service (MSS-VM) enables organizations to minimize the risk of vulnerabilities by quickly discovering weaknesses, measuring the potential risk and exposure, reporting, providing remediation information necessary to mitigate those risks on an on-going basis and facilitating reporting and compliance with regulations and best practices.

The purpose of this section is to highlight intelligence gathered from this and other services under contract as well as outside sources such honeypots, known malicious sources, vulnerability databases, relationships with CERT and CSIRT teams that GLESEC possesses, together with various other threat feeds.

The following graphs are dashboards generated by GLESEC's TIP™ platform. These dashboards are representative of metrics for this service.

It is important to establish a vulnerability management program as part of the information security strategy because soon after new vulnerabilities are discovered and reported by security researchers or vendors, attackers engineer exploit code and then launch that code against targets of interest. Any significant delays in finding or fixing software with dangerous vulnerabilities provides ample opportunity for persistent attackers to break through, gaining control over the vulnerable machines and getting access to the sensitive data they contain. Organizations that do not scan for vulnerabilities and proactively address discovered flaws face a significant likelihood of having their systems compromised.

Many of the vulnerabilities will provide CVE data. CVE (Common Vulnerabilities and Exposures) is a list of information security exposures and vulnerabilities sponsored by US-CERT and maintained by the MITRE Corporation. The CVE mission is to provide standard names for all publicly known security exposures as well as standard definitions for security terms. The CVE can be searched online at http://nvd.nist.gov/.

Vulnerability Score

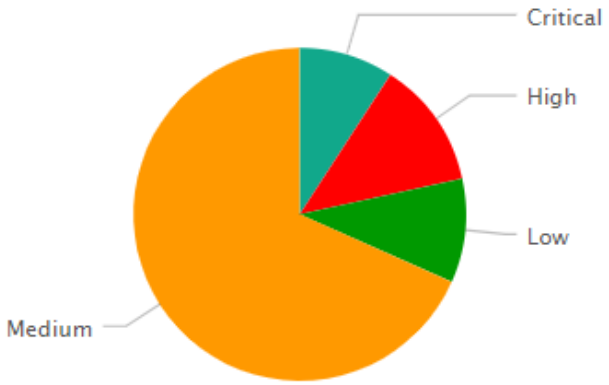
The score of a vulnerability is determined by its risk factor; Critical, High, Medium or Low, as well as its value in the Common Vulnerability Scoring System (CVSS). The CVSS "base score" represents the innate risk characteristic of each vulnerability.

CVSS is a vulnerability scoring system designed to provide an open and standardized method for rating IT vulnerabilities. CVSS helps organizations prioritize and coordinate a joint response to security vulnerabilities by communicating the base, temporal and environmental properties of each vulnerability. In addition to numeric scores, the CVSS provides severity rankings of High, Medium, and Low but these qualitative rankings are simply mapped from the numeric CVSS scores. Vulnerabilities are labeled as:

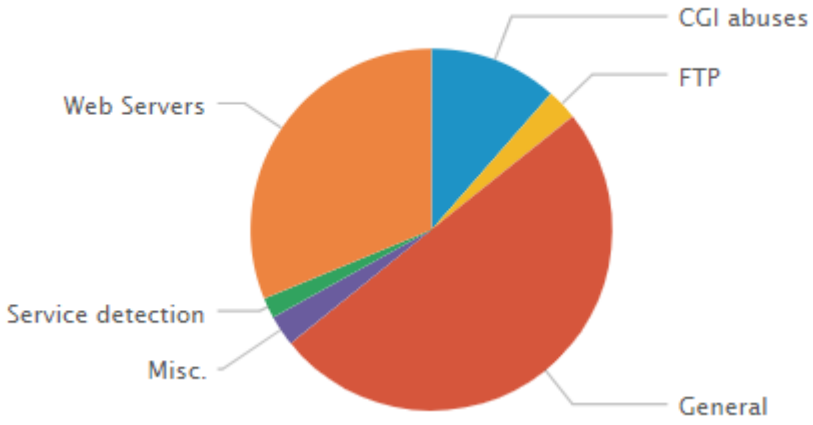
Low risk if they have a CVSS base score of 0.0 – 3.9
Medium risk if they have a CVSS base score of 4.0 – 6.9
High risk if they have a CVSS base score of 7.0 – 10.0

Vulnerability Information

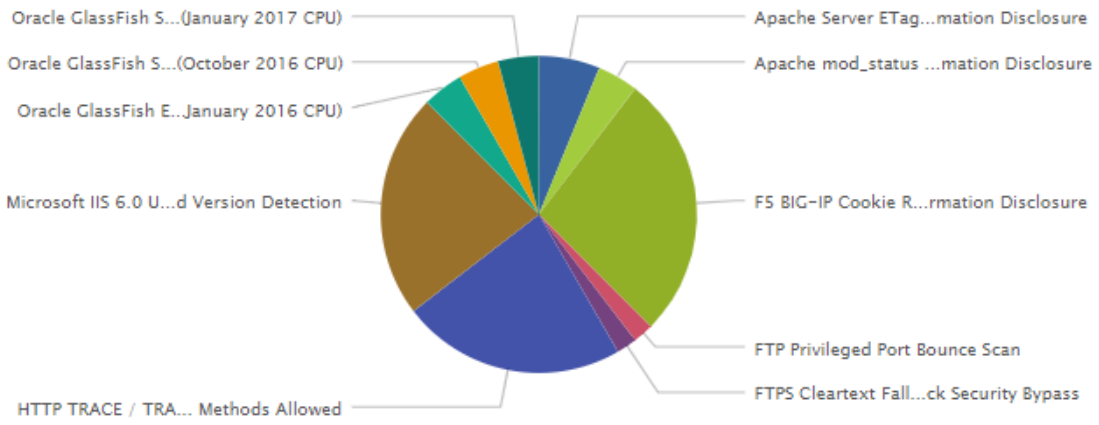
Graph: Risk Distribution
This report depicts the risk distribution of vulnerabilities discovered this report period



Graph: Most Frequent Vulnerability Category
This report depicts the most frequent vulnerabilities by category discovered this report period



Graph: Most Frequent Vulnerability Name
This report depicts the most frequent vulnerabilities discovered this report period



Graph: Most Vulnerable Host
This report depicts the most vulnerable hosts discovered this report period

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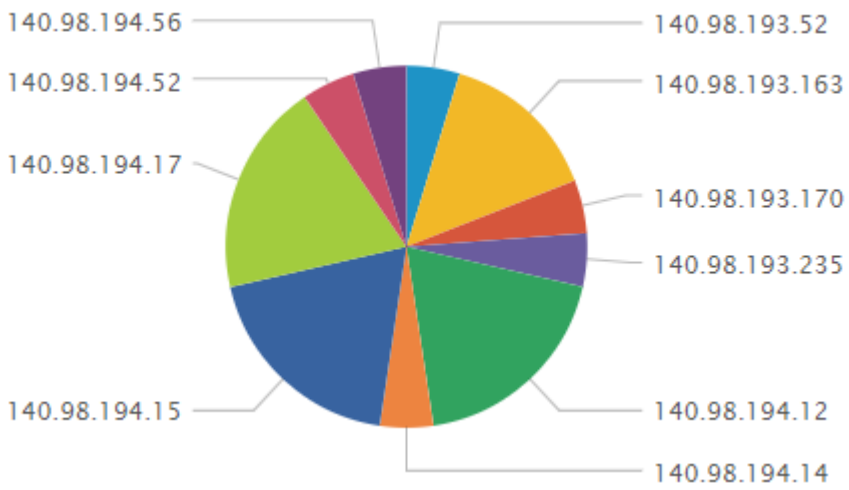
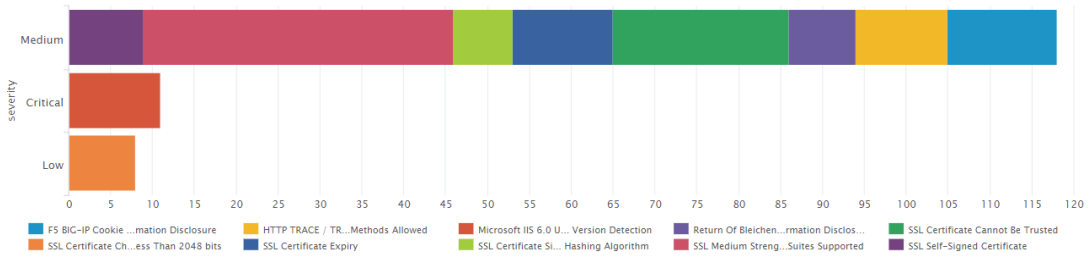
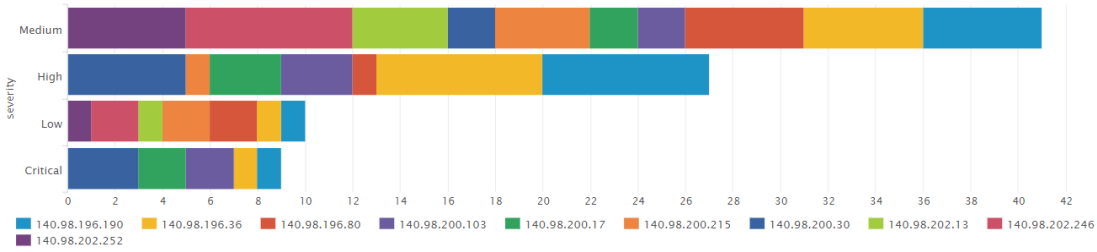


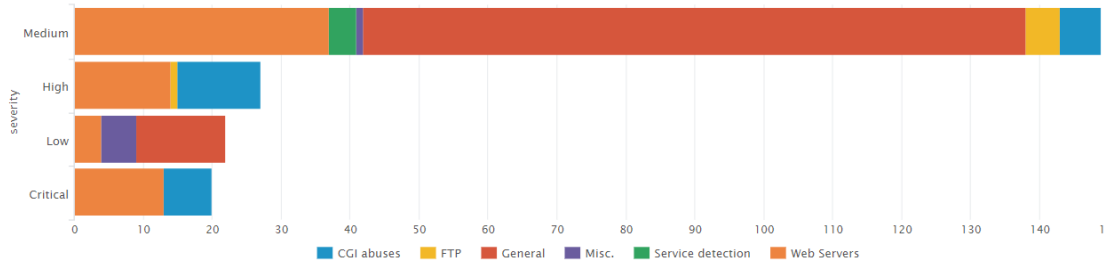
Graph: Vulnerability Risk by Vulnerability Name
This report illustrates the vulnerability risk and count by vulnerability name discovered this report period



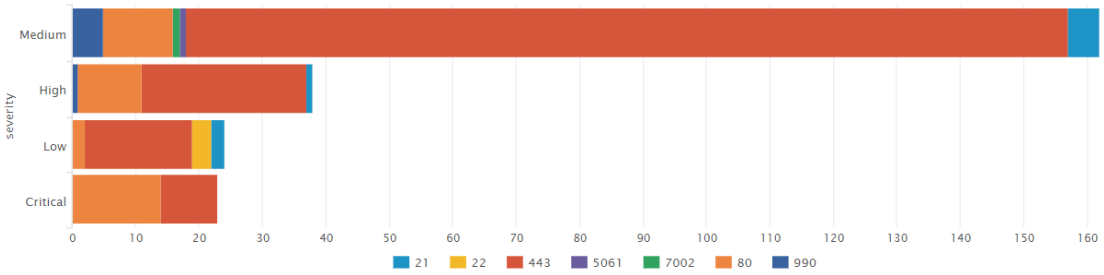
Graph: Vulnerability Risk by Host
This report illustrates the vulnerability risk and count by category discovered this report period



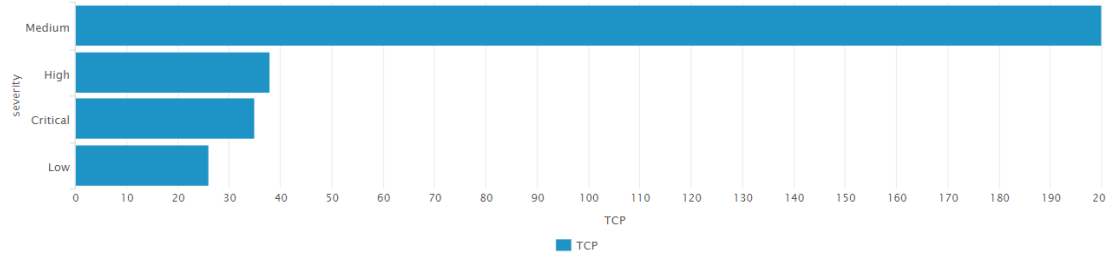
Graph: Vulnerability Risk by Category
This report illustrates the vulnerability risk and count by category discovered this report period



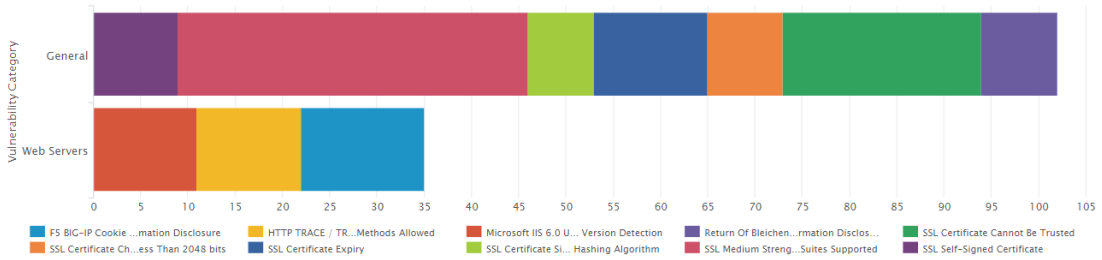
Graph: Vulnerability Risk by Port
This report illustrates the vulnerability risk and count by port discovered this report period



Graph: Vulnerability Risk by Protocol
This report illustrates the vulnerability risk and count by protocol discovered this report period

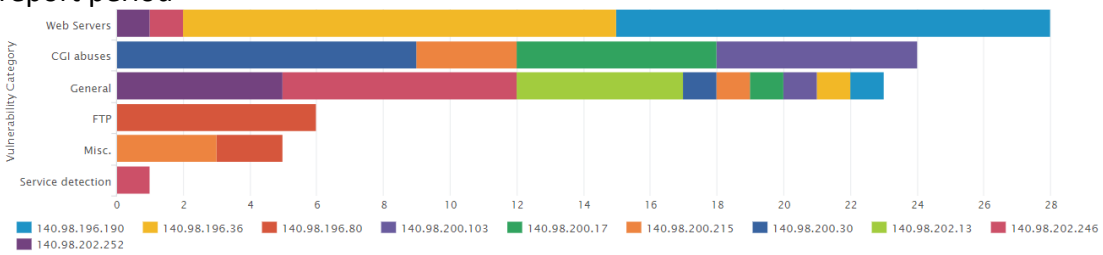


Graph: Vulnerability Category by Vulnerability Name
This report illustrates the vulnerability category and count by vulnerability name discovered this report period



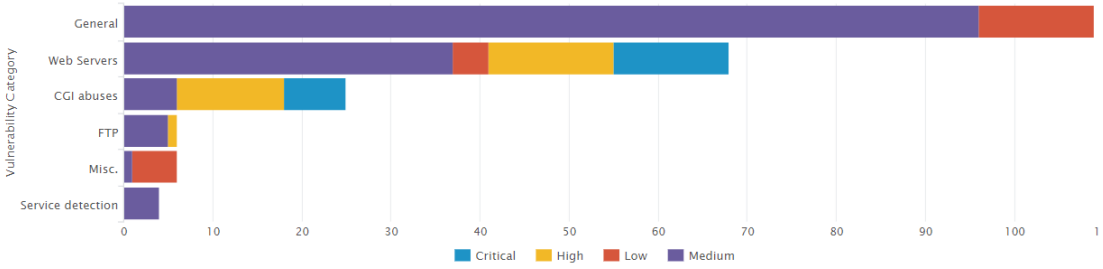
Graph: Vulnerability Category by Host

This report illustrates the vulnerability category and count by host discovered this report period



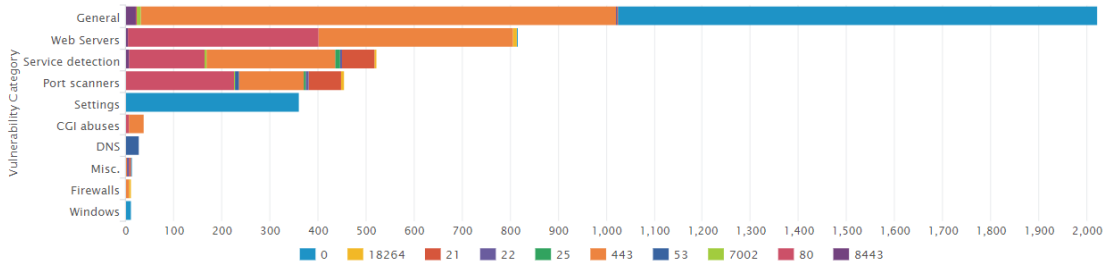
Graph: Vulnerability Category by Risk

This report illustrates the vulnerability category and count by risk discovered this report period

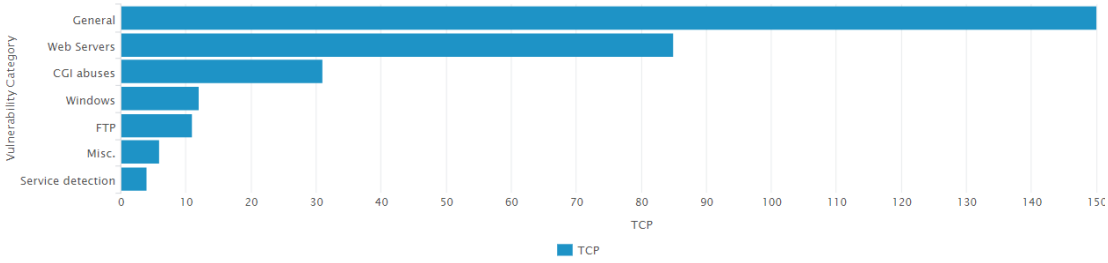


Graph: Vulnerability Category by Port

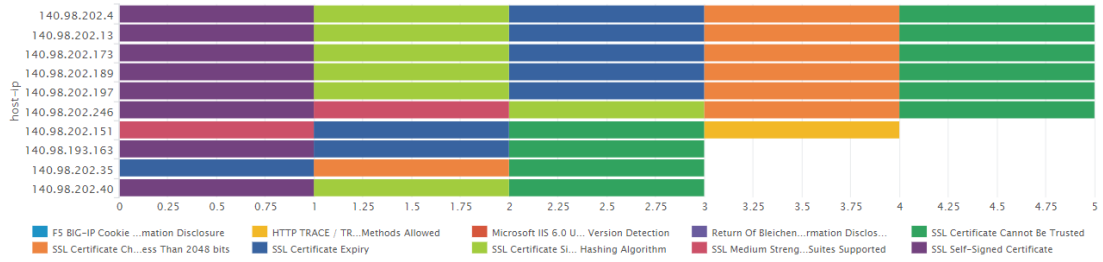
This report illustrates the vulnerability category and count by port discovered this report period



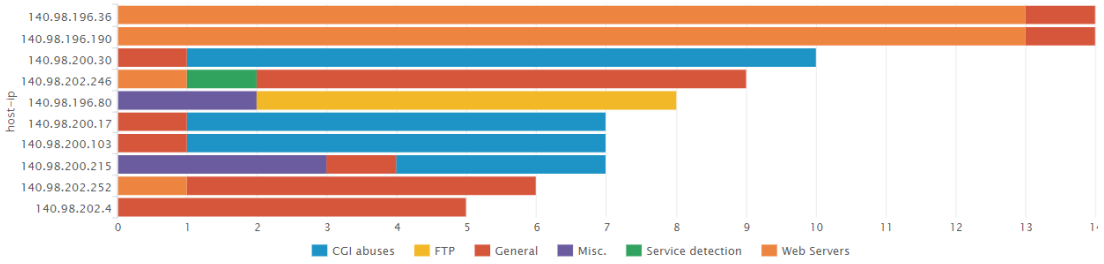
Graph: Vulnerability Category by Protocol
This report illustrates the vulnerability category and count by protocol discovered this report period



Graph: Host by Vulnerability Name
This report illustrates the vulnerability name and count by hosts discovered this report period

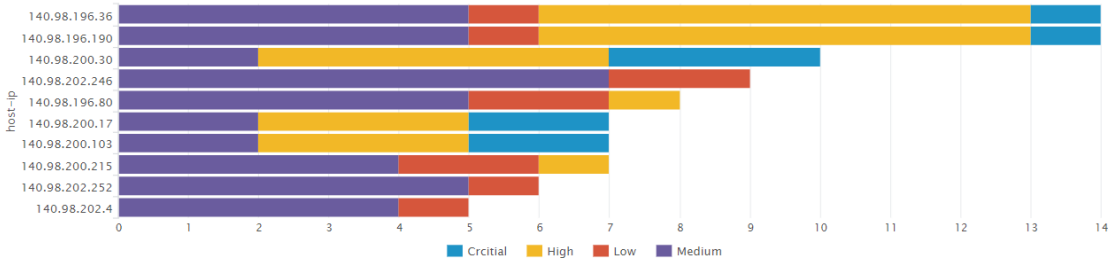


Graph: Host by Vulnerability Category
This report illustrates the vulnerability category and count by hosts discovered this report period.



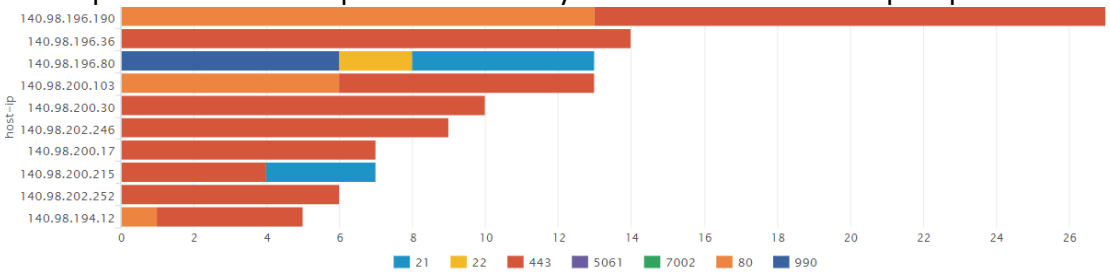
Graph: Host by Vulnerability Risk

This report illustrates the vulnerability risk and count by hosts discovered this report period



Graph: Host by Port

This report illustrates the port and count by hosts discovered this report period



Cyber Security Operations

The purpose of this section is to highlight the activities performed by GLESEC's Global Operations Center (GOC) including: monitoring availability and performance of services under contract, Change Management, Incident Response activities and Consulting Activities.

Definitions

Links a malicious website is a site that attempts to install malware onto your device.

Payload the payload is the part of malware such as worms or viruses which performs the malicious action; deleting data, sending spam or encrypting data. In addition to the payload, such malware also typically has overhead code aimed at simply spreading itself, or avoiding detection. Payload can be A small software that downloads the more advanced Payload from the remote C&C.

Worm malware computer program that replicates itself in order to spread to other computers. Often, it uses a computer network to spread itself, relying on security failures on the target computer to access it. Worms almost always cause at least some harm to the network, even if only by consuming bandwidth.

Ransomware is computer malware that installs covertly on a victim's computer, executes a crypto virology attack that adversely affects it, and demands a ransom payment to decrypt it or not publish it. Simple ransomware may lock the system in a way which is not difficult for a knowledgeable person to reverse, and display a message requesting payment to unlock it. More advanced malware encrypts the victim's files, making them inaccessible, and demands a ransom payment to decrypt them.

Malware is any software used to disrupt computer operations, gather sensitive information, gain access to private computer systems, or display unwanted advertising. The fragment may be machine code that infects some existing application, utility, or system program, or even the code used to boot a computer system. Malware is defined by its malicious intent, acting against the requirements of the computer user, and does not include software that causes unintentional harm due to some deficiency. Malwares are often referenced to Trojans, C&C, credential

Theft Software.

Dummy The dummy files are Windows Message Box, code execution proof of concept. Malicious files are coded very often (thousands a day) and therefore relying on Signatures to block malicious files is outdated. Dummy files can prove the code execution is possible and share the same aspect of new unsigned malicious files.

Exploit An exploit is a piece of software, a chunk of data, or a sequence of commands that takes advantage of a bug or vulnerability in order to cause unintended or unanticipated behavior to occur on computers. Such behavior frequently includes things like gaining control of a computer system, allowing privilege escalation, or a denial-of-service

High Vulnerabilities are defined as being in one or more of the following categories: Backdoors, full Read/Write access to files, remote Command Execution, Potential Trojan Horses, or critical Information Disclosure (e.g. passwords).

Medium Vulnerabilities describes vulnerabilities that either expose sensitive data, directory browsing and traversal, disclosure of security controls, facilitate unauthorized use of services or denial of service to an attacker.

Low Vulnerabilities describes vulnerabilities that allow preliminary or sensitive information gathering for an attacker or pose risks that are not entirely security related but maybe used in social engineering or similar attacks.

SMB/NetBIOS vulnerabilities could allow remote code execution on affected systems. An attacker who successfully exploits these vulnerabilities could install programs; view, change, or delete data; or create new accounts with full user rights. Firewall best practices and standard default firewall configurations can help protect networks from attacks that originate outside the enterprise perimeter. Best practices recommend that systems that are connected to the Internet have a minimal number of ports exposed.

Simple Network vulnerabilities affect protocols like NTP, ICMP and common network applications like SharePoint among others. This is not meant to be a comprehensive list.

Authentication and encryption are two intertwined technologies that help to insure that your data remains secure. Authentication is the process of insuring that both ends of the connection are in fact "who" they say they are. This applies not only to the entity trying to access a service (such as an end user) but to the entity providing the service, as well (such as a file server or Web site). Encryption helps to insure that the information within a session is not compromised. This includes not only reading the information within a data stream, but altering it, as well.

While authentication and encryption each has its own responsibilities in securing a communication session, maximum protection can only be achieved when the two are combined. For this reason, many security protocols contain both authentication and encryption specifications.

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