



## Jigsaw Security Enterprise Capabilities Statement

### Overview

Jigsaw Security Enterprise Incorporated provides a threat streaming analytics platform for cyber security operators. The company is a Service Disabled Veteran Owned Small Business (SDVOSB) located in Eastern North Carolina. The company provides security software for auditing, compliance and monitoring of secure environments as well as IT consulting and is holder of a nationwide license for wireless operation as a common carrier, non-common carrier and private communications network operator utilizing Wimax technologies to quickly and easily deploy communications for Government and Business users, provide disaster recovery or to provide emergency communications. Jigsaw Security Enterprise brings the right skills, personnel and software together to do more with less resources, reliably and efficiently.

Our small team operates a security operations center that provides support to our US Government clients, Private Clients through the sharing of threat intelligence data, monitoring and management of security devices and through security consulting and customization of off the shelf and custom developed components. In addition we have board certified CE training courses in Technical Surveillance Countermeasures as well as a Counterintelligence School designation from the North Carolina Private Protective Services Board and are licensed to provide services and training. In addition we have court recognized forensics experts on staff that are also licensed private investigators. FAA licensed pilots and drone operators.

### What sets us apart from the competition?

Jigsaw Security can do more work with less resources through our automation and software development. Our core personnel have a minimum of 20 years experience and have extensive training in their disciplines. Since we operate our company as an employee owned and operated company, our scientist, engineers and developers have vested interest in seeing a project through to success. Since we have build management platforms for our software we find that we are the company that others come to when they need multi tenant solutions to manage their customers in a logical and cost effective manner. Our strategic mix of capabilities ensures that our engineers have the tools and resources needed to make your project a success by thinking outside the box to select the right solution if it exist or to create a solution if it doesn't. This is how we succeed in a highly competitive environment.

### Jigsaw Threat Mitigation Model (Our approach to Security)

Phase 1 Personnel/Insider Threat	Phase 2 Intelligence	Phase 3 Physical Controls	Phase 4 System Controls & Access	Phase 5 Counter Operations	Phase 6 Audit & Documentation
<ul style="list-style-type: none"> <li>• HR Practices</li> <li>• Training</li> <li>• Safety</li> <li>• Protection</li> <li>• Manufacturing Process</li> <li>• Contractors</li> </ul>	<ul style="list-style-type: none"> <li>• Requirement</li> <li>• Collection</li> <li>• Analysis</li> <li>• Dissemination</li> <li>• Application</li> <li>• Evaluation &amp; Feedback</li> </ul>	<ul style="list-style-type: none"> <li>• Surveillance</li> <li>• Access Controls</li> <li>• Guards</li> </ul>	<ul style="list-style-type: none"> <li>• Network Systems</li> <li>• Forensic Investigations</li> <li>• Incident Handling</li> </ul>	<ul style="list-style-type: none"> <li>• Threat Hunting</li> <li>• Pen Testing</li> <li>• Red Teaming</li> <li>• TSCM</li> <li>• OPSEC</li> <li>• Executive Protection</li> </ul>	<ul style="list-style-type: none"> <li>• Policies and documentation of procedures</li> <li>• Normal operating procedures</li> <li>• Abnormal operating</li> </ul>

### Core Capabilities

Our technology experts, business professionals, scientist and engineers design and implement solutions in the areas of:

Hadoop & Elasticsearch	Networking and Load Balancer Consulting	WiMAX Wireless Technology	Computer Forensics
Private Investigation	Certified Onsite Inspectors	Cloudera Certified Hadoop Administrators	Data Analytics and Mining
Threat Intelligence	Auditing and Compliance	Software Development*	Law Enforcement Training
3eTI Wireless Equipment	UAS Licensed Remote Pilots	Electronic Countermeasures	TSCM Training and Instruction
AWS and Azure Consulting			

### Consulting

Our consulting services focus on integrated solutions and development of software in all other areas. For instance our developers can write Hadoop modules or write custom software to perform computer forensics or monitor wireless networks. Our development team is the lead of our consulting efforts making our team one of the most flexible and agile consulting teams out there. We develop rapid solution to consulting problems on time and under budget in most instances.

### Technology

Our technology profile includes big data, parallel processing, custom written and supported software, data ingestion and normalization, data storage design and system development, load balancing and solutions of scale, COTS and GOTS integration into existing or new technology environments and signals technology. If we had to sum up our technology it would be a signals enabled big data fusion platform capable of verifying and reporting on security issues through the ingestion, normalization and collection of various data sets within a secured environment.

### Federal Status and Certifications

SBA – Service disabled veteran owned small business, FAA Licensed Private Pilots, FAA Licensed Remote Drone Operators  
Jigsaw Security has an FCL at the **Top Secret/SCI** level and cleared talent pool



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### **Contract Vehicles**

NASA SEWP V – Partner Technology Inclusion

### **State Certifications**

North Carolina Private Investigation, North Carolina Electronic Countermeasures, North Carolina Electronic Countermeasures School, Expert Witness Status North Carolina, Virginia, Pennsylvania, South Carolina and Federal Courts

### **Major Clients and Past Performance (\* indicates subcontract)**

State of North Carolina Department of Health and Human Services, State of North Carolina Attorney Generals Office, US House of Representatives, Federal Bureau of Investigation, Noridian Mutual Insurance Company, Blue Cross Blue Shield of Minnesota, Cancer Care Ontario, National Institutes of Health\*, US Environmental Protection Agency\*

### **Contact Information**

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**Cyber Security (Defensive)**  
Jigsaw Security Enterprise has a complete Cyber Security Operations Program that is built around the Jigsaw Enterprise Platform. The platform allows users to ingest data (logs, packet data, phone call recordings, OSINT audio, Sensor Logs, etc.) into the platform. Once in the platform this information is analyzed whereas data that is interesting to the operator is highlighted (keyword, action chain, event driven) using analytics to find things of interest. For instance if you have a keyword alerting setup maybe you want to find the words bomb and police in the same location. When a bad actor discusses bomb making in a forum and the proximity of the word bomb and police occur in the forum message post on the Internet, the software will flag that article for review by an analyst. In addition another example would be if a sensor detected communications traffic between two parties whereas one of the parties is on the alert list (also known as a watch list), the software will mark the conversation of voice recording for review. The information collected by this system can stop attackers in their tracks as we disrupt known and unknown activity in near real time using DNS sinkhole technology as well as active firewall manipulation from our enterprise Cyber Security Platform.

Just recently a new threat using NSA derived source code known as “Wannacry” hit the Internet as a new ransomware variant. Jigsaw Security was aware of this activity long before it was weaponized and we were protecting our clients from this threat since 2015 when we first observed malicious activity. As a result none of our protected clients were affected by the ransomware and we made attribution on this attack months before the media started reporting that this activity was related to North Korea. North Korea was retaliating from the SWIFT transfer restricting the ability of the regime to move money and that was the reason for the attack. It was a propaganda move similar to the launch recently of ballistic missiles to show of the technologies being used.

Jigsaw Security Operates a fully staffed 24X7 Security Operations Center that provides intelligence to our customers, web based access to intelligence products and a shared cyber fusion capability where all cyber intelligence information can be displayed in our analytic platform with customization to show what is happening on our customers networks. We are a manage security services provider that provides monitoring, incident response, computer and network forensics, custom sensors and red team services.

### **Cyber Security (Offensive)**

Jigsaw Security Enterprise performs Technical Surveillance and positive Cyber Security operations by coding and using one time pieces of code to perform objectives. Members of our Red Team have years of experience in finding and exploiting vulnerabilities related to technical issue, personnel and system weaknesses. This highly controlled specialty service is available to only US Based Companies.

### **Encryption Technology**

Since 2008 Jigsaw Security has been using our internal encryption utility “Data Lock” to ensure that our own and the communications of our customers cannot be intercepted. The Data Lock program is a proprietary encryption program in which we have never published the algorithm so it is impossible to reverse engineer or decrypt. In fact the US State Department has ask us not to distribute the program because they had no way to decrypt the communications (and neither do we as the customer controls all elements of the encryption program) with something they have, something they know and a non-published encryption algorithm that is based on Triple DES with enhanced protection making the window of decryption extremely short and impossible in the time-frame available to brute force it. Instead of having an encryption program that is based on the amount of time needed to decrypt our methodology was to build an encryption process that did not use time as the factor needed to decrypt communications. Triple DES itself can be decrypted in 235 years on a single computer, now that cloud computing has arrived with parallel processing that same communications can be decrypted in 23 minutes using off the shelf components making it insecure but mostly secure for most purposes. By requiring something you have, something you know and eliminating the mathematically insecure element of time we have a truly secure encryption product. This product is for use by US Based companies only and may not be exported to third parties in other countries as the software is considered a munition under ITAR rules.

### **Aerial Surveillance**

Jigsaw Security operates several aerial platforms to include aircraft and drone technology. In addition we utilize sensors to capture and intercept RF propagated information, aerial imagery to include standard and infrared graphics and more. This service is available in most countries in the world and we are the leader in aerial capture technologies.

### **Secured Communications Facilities and TSCM (Technical Surveillance Countermeasures)**

Jigsaw Security provides countermeasures to protect against eavesdropping and interception. The staff at Jigsaw Security are certified in the security of facilities, communications and other methods and the protection of such methods. Every year we find previously unknown malicious programs on computers, communications equipment, eavesdropping devices (voice and data) and are experts in this field. We secure several hundred facilities and test the security of over 50 highly secured facilities around the world. We test for infrared, ultrasonic, RF, microwave powered listening devices, taps, intercept and other communications flaws and document, disrupt or secure our customers preventing theft of trade secrets, surreptitious interception of communications to include voice, video, data and human attacks.

### **Training**



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Jigsaw Security Enterprise provides training in security, technical countermeasures, safe travel and movement, communications and RF technologies. Our highly specialized training is a bedrock in performance of our contracts and we adhere to common standards using internally developed tools and processes to protect our clients and educate them on threats that are not part of the normal security provided by most training facilities. Today most companies expend over 65% of their defenses on cyber threat protection whereas 80% of the problems that lead to compromises occur at the human interface level. Cyber threats can be effectively defeated whereas it is hard to control the human element of security, behavior and internal threats that account for the 80% of the real threat in the world today. Terrorism is also an area that we cover and train many corporations on prior to travel. Our risk management approach ensures the highest level of protection for our clients.

### **IT Support**

Jigsaw Security provides IT support for workstations, servers, databases, big data, security, communications and other consulting.

### **Data Services**

Jigsaw Security is a licensed Private Investigative company in the state of North Carolina. We have access to advanced financial, driver, public and credit related datasets. In addition we provide risk management for pre-hire applications, credit and risk analysis for loans and commercial services and much more. Below are some of the data we provide to our customers through our investigative division of Jigsaw Security.

Locate Reports – Whereabouts	Assets Discovery	Vehicles and Transportation Search	Banking and Financial Details
Skip Trace and Bondsman Activity	Collections and Bill Collection	Government Databases – Watch List	Repossession
Corporate Risk	Corporate Auditing and Risk	Law Enforcement Databases	Traffic Camera Image Acquisition
Vehicle History Reporting	Satellite & Drone Imagery	Phone and Communications Searches	Public Records Search
Business Background & Credit	Court Records	Liens and Judgment Search	Criminal and Negative Info Search

### **Point to Point and Point to Multipoint Communications**

Jigsaw Security operates under FCC License WQVC235 as a common carrier, non-common carrier and private communications company. We offer RF services to connect buildings within a 200 kilometer range and specialize in commercial communications eliminating the need for sending information over the Internet or public networks. This disaster recovery capability allows Jigsaw to deploy enterprise class communications in the event of a natural or man made disaster.