



Smarter-Better-Faster

**Human-Computer Hybrid Architecture
– Bionic defence with edgescan**





FULLSTACK VULNERABILITY MANAGEMENT™

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Introduction

Automation is great, doing things fast in a scalable way is key to maintaining a strong cyber security posture. The **“elephant in the room”** is that the reliance on security automation alone results in inaccuracies, false positives and false negatives.

Our mantra at **edgescan** is to use automation where possible but also architect our SaaS to make our team “Bionic”.

Bionic defenders leverage human intelligence with automation to deliver deep coverage and accurate results. The outcome is Vulnerability Intelligence.

Appropriate Automation

Automation is not a silver bullet. Its only an assistant who does not get tired, distracted and can deliver consistent results, assuming the data supplied to it is well defined, comprehensive and reflects the task to be completed. It only does what we tell it to do, based on a set of conditions and inputs.

Automation is great for large scale repetitive tasks. Tasks which are clearly defined, have minimal edge-case scenarios and processing can be delivered in a repeatable and consistent manner.

Automation is not appropriate for risk rating, contextual risk prioritizing, vulnerability validation, assessment scoping & production safety assessment controls. But the hybrid approach of automation and human intelligence, the bionic defender, results in significant scalability, accuracy and cost efficiency.

Tasks such as *Vulnerability Scanning, Asset Profiling, Scheduling, Notification of events, Report generation, Data/Vulnerability Correlation and historical comparison of data-sets* are well suited for automated solutions.

The challenge is that the above tasks need to be well defined prior to automation taking charge.

The scope and depth of an automated task needs to be defined by the human operator. The effectiveness of the automated task is only as good as what is supplied to it.

For example vulnerability scanning can only be effective if the system being tested is mapped out correctly, exclusions and rules of engagement are defined correctly and the automation is supplied a clearly defined objective based on the scope of the task required. This provides appropriate coverage and a defined rule-set for the automation to execute within intelligently defined parameters.

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The Bionic Defender (Human) – Feeding the Machine

- The defender, the intelligence, who understands scope and objectives, feeds the automaton with tasks and sufficient data to execute the required task. The automation is only as good as how it is used and tuned by the defender based on the task at hand.
- The defender helps ensure the automation is delivering deep coverage, delivering coverage in a timely manner and performing the correct testing, all in a production safe way (tuning).
- The defender examines the output after it has been processed by automation. Automation does not understand risk, context, and can not identify edge-case or logical/business logic issues which may result in a vulnerability.
- The defender leverages automation to correlate and compare data, record and develop metrics but the ultimate risk based information is curated by the bionic defender.
- With the intelligence and experience of the defender in symbiosis with automation cyber security can be delivered at scale and with a high level of accuracy – Curated vulnerability information (Not Data) which results in vulnerability intelligence.
- The defender supports other vested interests (clients) in terms of remediation advice, context driven risk decisions and general support to mitigate and discovered issues.



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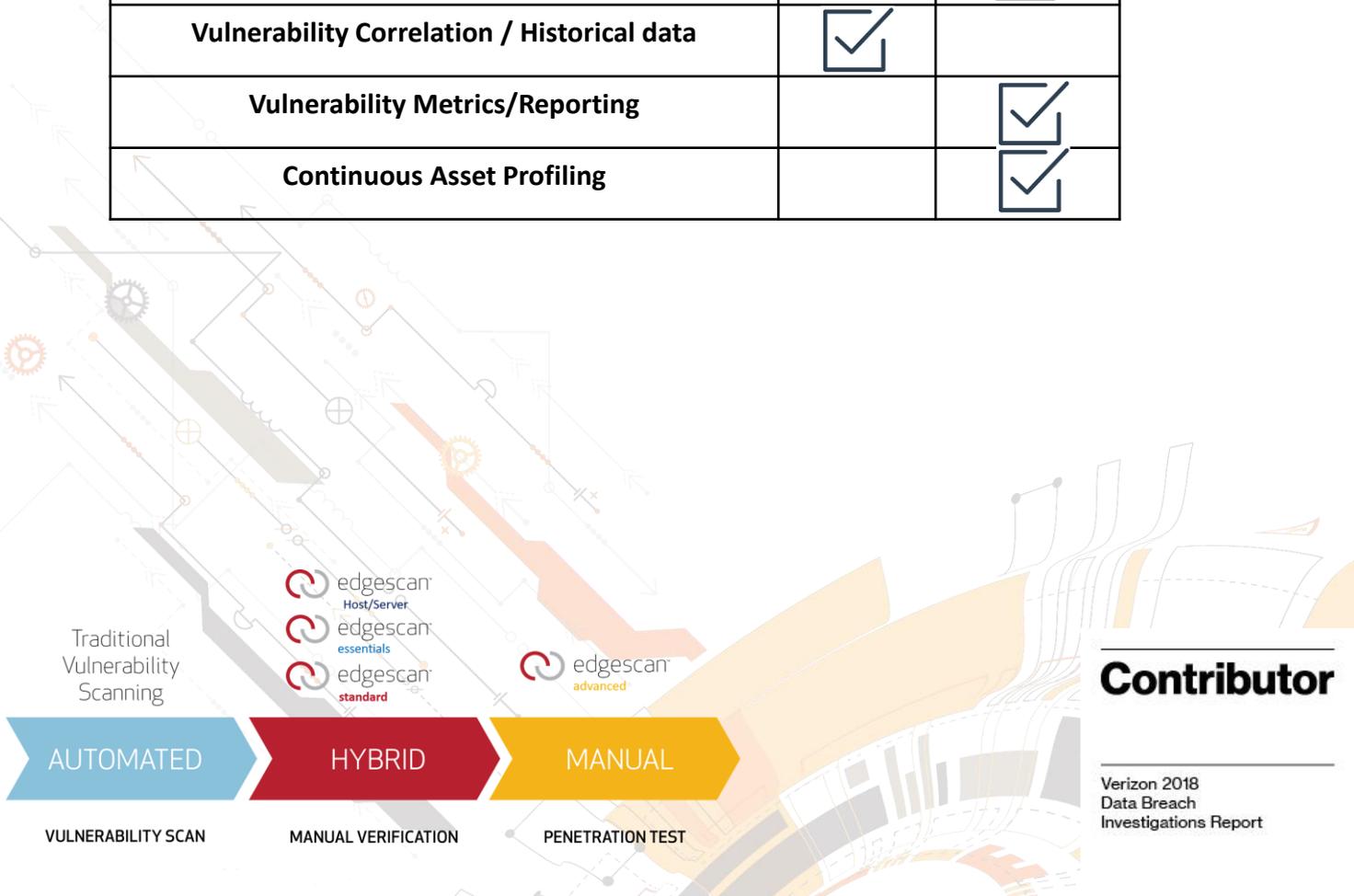
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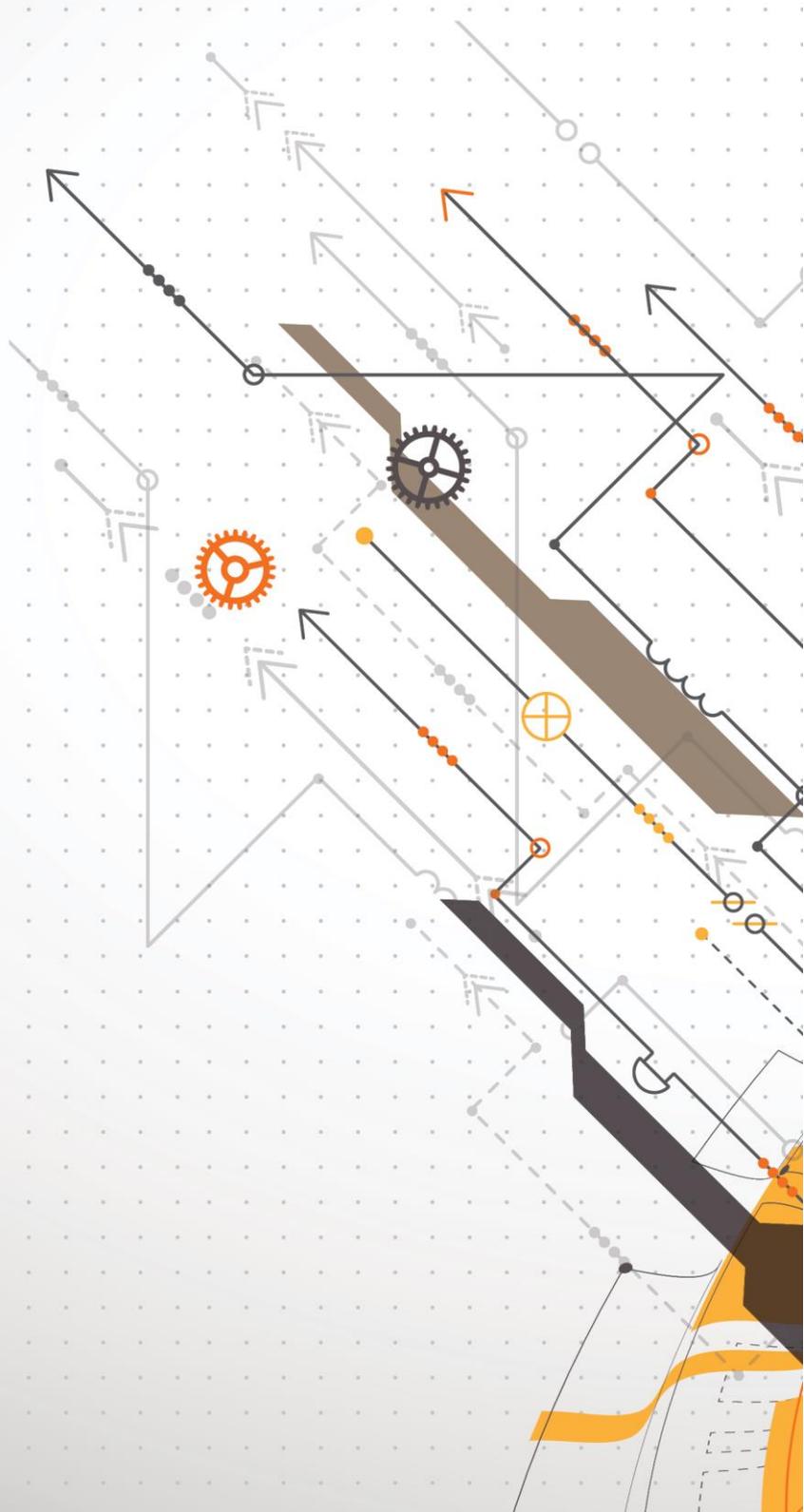
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The hybrid (Bionic) Cyber security mapping table

- Below maps what is Automated and what is “Bionic”. The blend of human expertise and leading edge automation results in unparalleled coverage, accuracy, operational efficiency and reduce investment.

Task	Human	Automation
Assessment Scheduling		<input checked="" type="checkbox"/>
Assessment Scope/Technical Configuration/Tuning	<input checked="" type="checkbox"/>	
Vulnerability Detection/Scanning		<input checked="" type="checkbox"/>
Vulnerability Verification	<input checked="" type="checkbox"/>	
Risk Rating / Prioritization	<input checked="" type="checkbox"/>	
Alerting/Incident and Event		<input checked="" type="checkbox"/>
Vulnerability Correlation / Historical data	<input checked="" type="checkbox"/>	
Vulnerability Metrics/Reporting		<input checked="" type="checkbox"/>
Continuous Asset Profiling		<input checked="" type="checkbox"/>





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