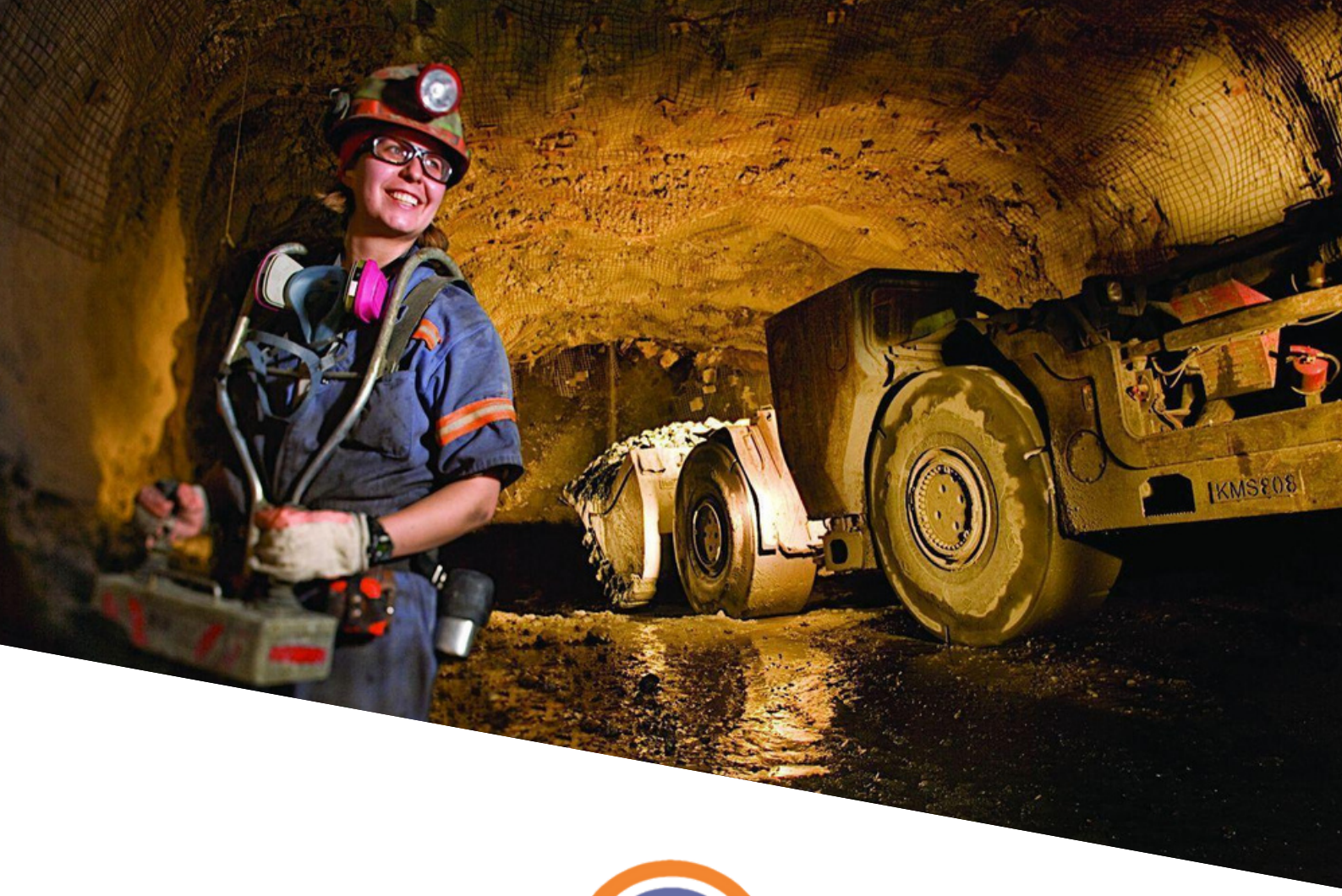


smaRTE BY FLEX
SOLUTIONS DIGITAL

SMARTE SPLICE

MINING

"REAL-TIME OPERATIONAL EXCELLENCE"

FLEX SMARTE SOLUTIONS

FLAWLESS EXECUTION THROUGH DIGITAL MASTERY

We will help you to maximise your organisation's Return on operational Assets (RooA). This means that we enable you to operate your assets as effectively and efficiently as possible, while also ensuring they are healthy and safe. In this way, you reduce your operational costs and risks, becoming far more profitable as a result.

We can achieve this through one or more of our six "smaRTE solutions" that have been built using a combination of our leading-edge, digital technologies and are focused around our "Real-Time Operational Excellence (RTE)" mantra.

$$\frac{\text{Operating Income}}{\text{Average Operating Assets}} = \text{RETURN ON OPERATING ASSETS}$$

OT CYBER SECURITY

BACKGROUND

Mining companies are extremely vulnerable to OT Cyberattacks

Cybersecurity professionals are warning that threat actors have been targeting mining and metals companies more frequently with several incidents reported over the last 18 months. A survey earlier this year by Ernst & Young found that 71% of mining respondents have seen an increase in the number of disruptive attacks over the past 12 months and that 55% of mining and metals executives were worried about their ability to manage a cybersecurity threat.

Most organisations have Information Technology (IT) cybersecurity policies and systems in place believing that they are protected. Very few consider the vulnerabilities that are present in their Operational Technology (OT) environment. Savvy mining stakeholders, however, understand that IT Cybersecurity and OT Cybersecurity are vastly different fields. The traditional "Air Gap" is difficult to maintain in an ever-increasing connected world, where OT-IT networks are converging. IT Cybersecurity solutions are also not designed to secure OT networks and assets.

OT Cybersecurity is therefore critical in asset-intensive industries, like mining, that has a great dependency on continued operations. Most of the mining equipment, technology, and related operational assets that are being used to perform production and extraction, are highly intelligent and connected. If this equipment or technology were to be exposed to a cyber attack, the entire mining operation could come to a halt, resulting in huge financial losses, serious injury, or even death.

It is therefore critical that an OT-focused cybersecurity intervention be employed that does not merely detect, but also prevents all connected OT equipment from becoming vulnerable to cyber-attacks. It must ensure the cyber-physical resilience of your mining environment, and It will also minimise the risk of production downtime.

OT CYBER SECURITY

THE TYPICAL OPERATIONAL VULNERABILITIES:

The following are common operational vulnerabilities inherent in most mining environments:

- Unpatched (vulnerable) code running on Data Historians, Engineering and Operator Stations, HMI panels, and PLCs (for HMIs and PLCs there are likely no patches available)
- Insecure configurations aimed to ensure interoperability between different vendor equipment
- Fragmented and unprotected identities, sometimes unchangeable vendor defaults
- Unauthenticated and unencrypted Industrial Control Protocols

THE RESULTANT IMPLICATIONS:

An adversary with a foothold on the network can leverage any of these inherent weaknesses to:

- Take over normal operations
- Disrupt normal operations (this can be achieved without a deep understanding of the industrial process, with reusable attack tools, such as Pipedream)
- Hold the production line to ransom (Operating logic can be changed and Engineers can be locked out of the PLCs)
- Steal intellectual property, such as by exfiltrating confidential design and process documentation
- Cause damage, destruction, or unsafe working conditions by manipulating the state of the managed process and blinding operators to the real state of the process

OT CYBER SECURITY

THE SMARTE SOLUTION - SPLICE:

smaRTE Splice actively prevents cyber-physical attacks through proactive vulnerability shielding inside an encrypted overlay network. It, therefore, embraces connection and convergence. It is the logical alternative to air gaps, firewalls, data diodes, and old-school thinking. The Splice solution comprises three layers with three operating modes as can be seen below:

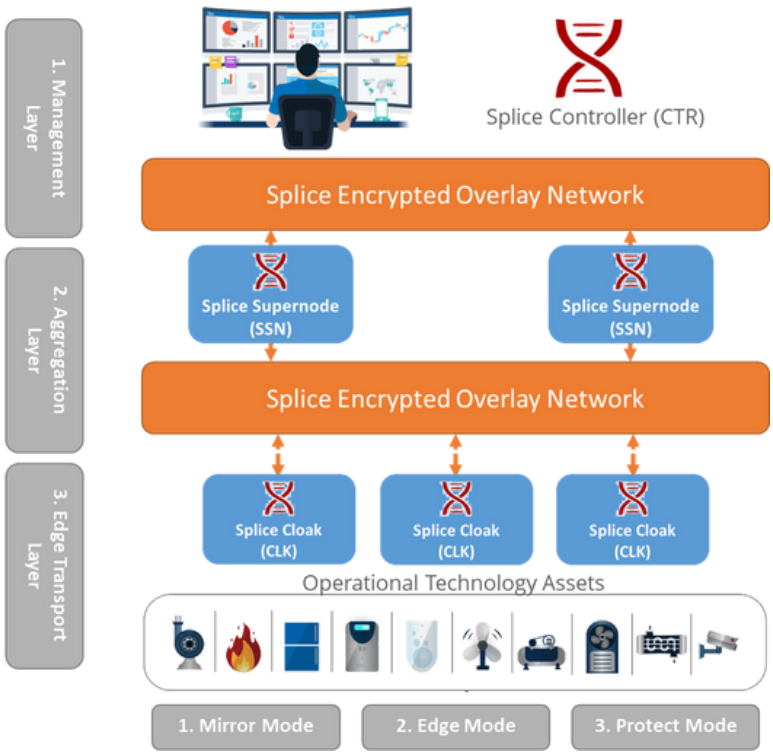
Simplicity & Flexibility!

3 Layers:

1. Management (Controller)
2. Aggregation (Supernode)
3. Edge Transport (Cloak)

3 Operating Modes:

1. Mirror - Observation
2. Edge – Manage access route to OT Equipment
3. Protect – All OT Equipment traffic via Splice



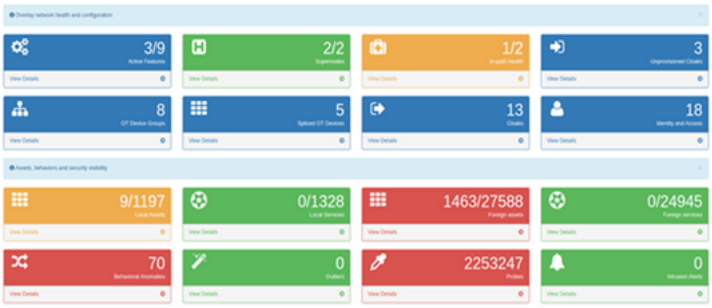
OT CYBER SECURITY

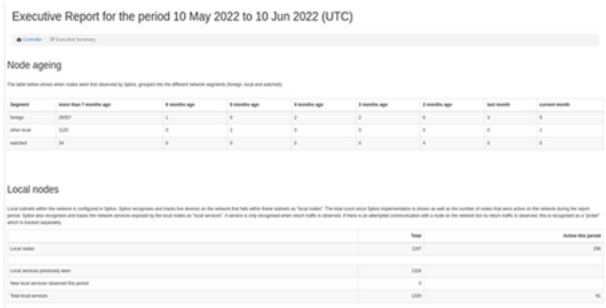
THE SMARTE SOLUTION - SPLICE:

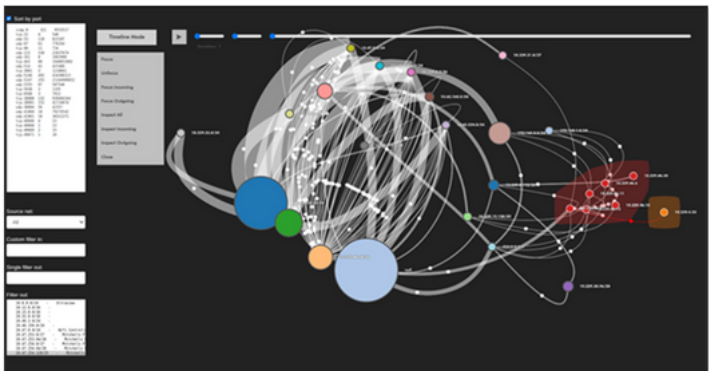
smaRTE Splice actively prevents cyber-physical attacks by providing:

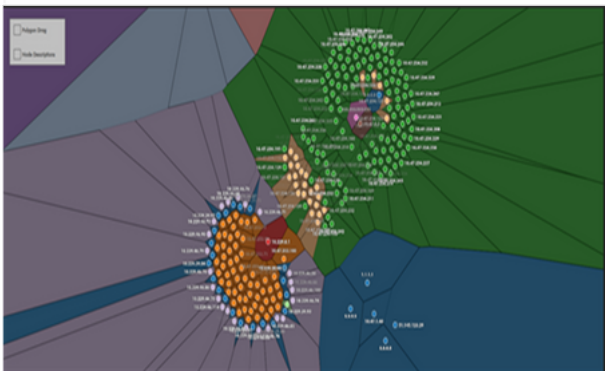
- Logical isolation within the control network core (rather than at the perimeter)
- Profiling of the entire control network traffic & full forensic audit trails (with visualisation of the “network universe”)
- Vulnerability shielding inside an encrypted overlay network
- Intrusion inspection
- Behavioural profiling & advanced machine learning-driven outlier & anomaly detection
- Passive node discovery & tracking
- Secure identity management
- Multi-factor authentication offloading
- Secure remote access for operators, engineers & support partners

Dashboard Examples:









OT CYBER SECURITY

THE BUSINESS BENEFITS:

- Actively reduces cyber exposure of all connected operational assets
- No rip-and-replace of existing network assets
- Continue operating with vulnerable equipment out in the field
- Enables passive asset management
- Increases asset uptime and production reliability

ROI < 1 YEAR!

INCREASE ROOA BY 10% OR MORE

CONTACT US TO FIND OUT MORE!

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