CACI

Thousands of devices. Zero margin for error.

Automating network remediation in a highly regulated environment.

Andre Bowen-Brown, CACI Ltd



Engineering automation in regulated networks



Andre Bowen-Brown

Senior Network Automation Engineer | CACI

Open-source developer https://docs.genja.co.uk

Over 25 years experience specialising in LAN, WAN, VoIP, security and network automation. Ex CCNP, JNCIS-ENT, JNCIA-Cloud, JNCDA.

Backed by CACI Network Services

CACI Network Services holds **317 technical certifications** across Cisco, Juniper, AWS, Azure, Google Cloud, Palo Alto, Fortinet, Check Point and Zscaler, plus 103 professional certifications covering architecture, governance and service management.

Home to **179 Cisco certifications**, including 23 CCIEs, 43 CCNPs and 38 CCNAs, supporting some of the UK's most complex enterprise and critical infrastructure environments.

TISAX® RESULT AVAILABLE

ISO

GDPR

CYBER ESSENTIALS CERTIFIED PLUS

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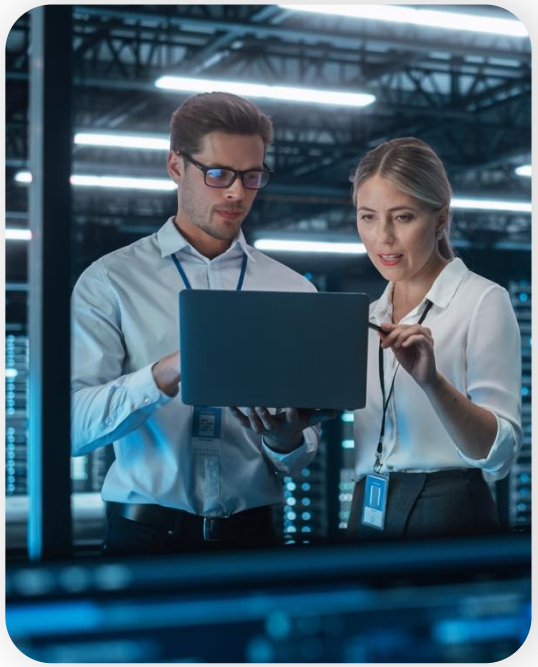
When compliance becomes a network operations problem

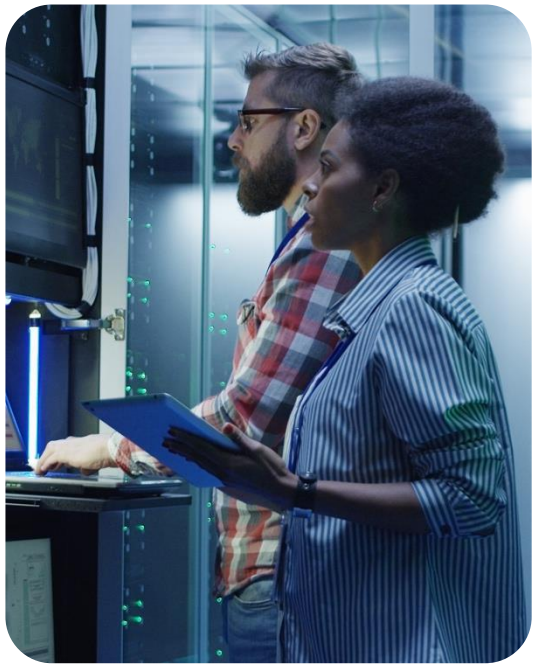
Highly regulated environment



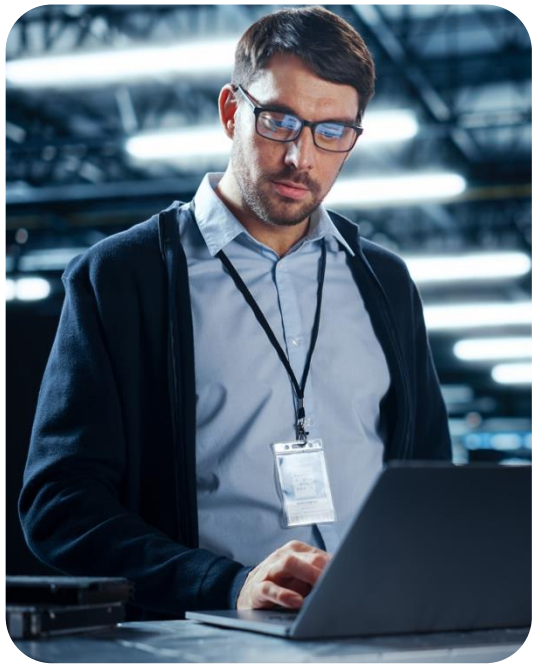
- Audit findings requiring remediation



- Thousands of vulnerabilities identified across the network



- Significant volume of configuration changes required



- Manual remediation was not viable at the scale required

The challenge wasn't the fix. It was the scale



Thousands

of vulnerabilities identified across the network

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The challenge wasn't the fix. It was the scale



Thousands

of devices requiring configuration changes

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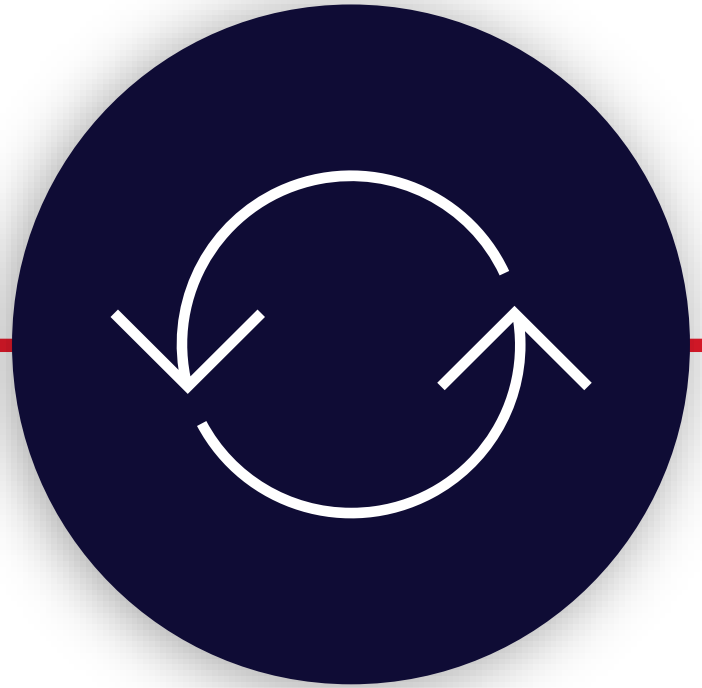
The challenge wasn't the fix. It was the scale



Hundreds

of devices per day requiring validation and upgrade

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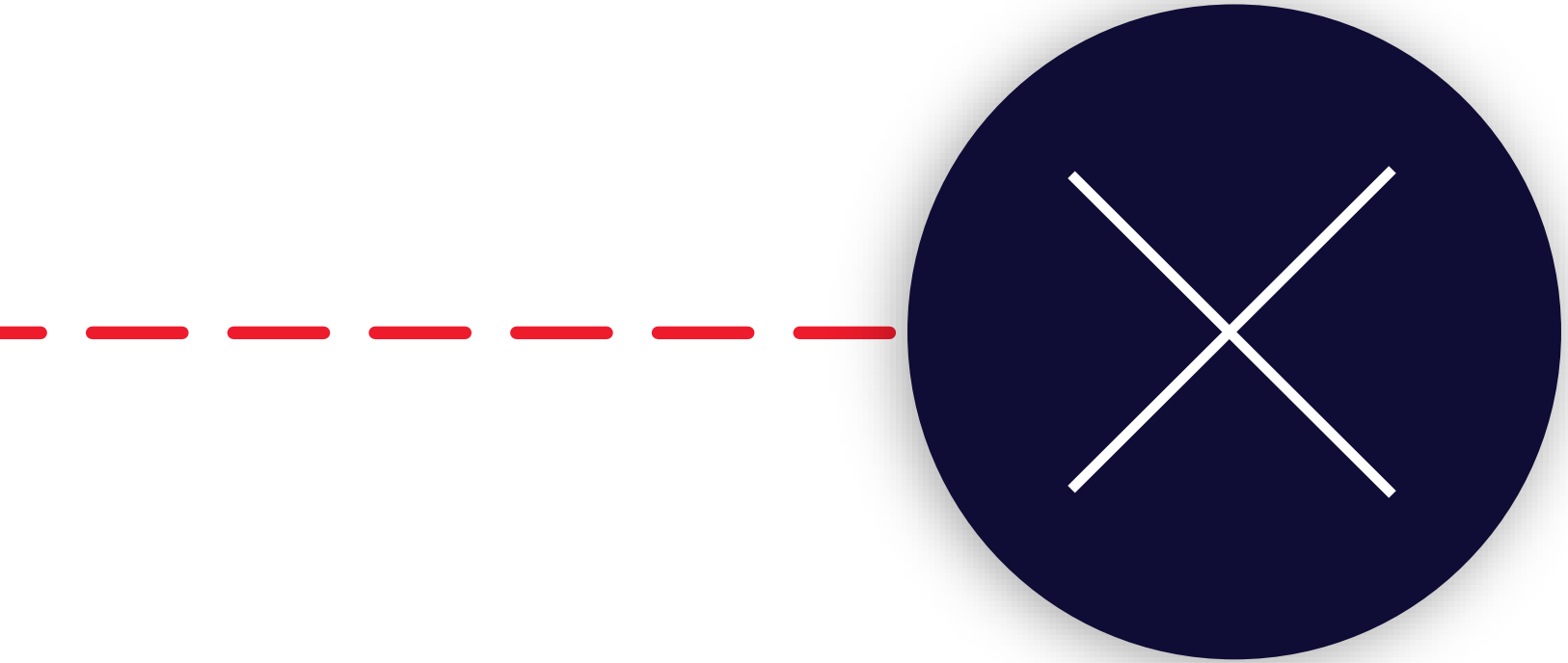
The challenge wasn’t the fix. It was the scale



Zero

margin for error in a regulated environment

Automating change at scale



Run compliance checks

Generate results/ remediation config

Raise changes with the implementation plans

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Automating change at scale



Run compliance checks

Generate results/ remediation config

Raise changes with the implementation plans

Plan checks/ Go-No-Go

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Automating change at scale



Run compliance checks

Generate results/ remediation config

Raise changes with the implementation plans

Plan checks/ Go-No-Go

Automated deployment

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Automating change at scale



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Raise changes with the implementation plans

Plan checks/ Go-No-Go

Automated deployment

Post checks

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Automating change at scale



Raise changes with the implementation plans

Plan checks/ Go-No-Go

Automated deployment

Post checks

Run compliance checks (validations)

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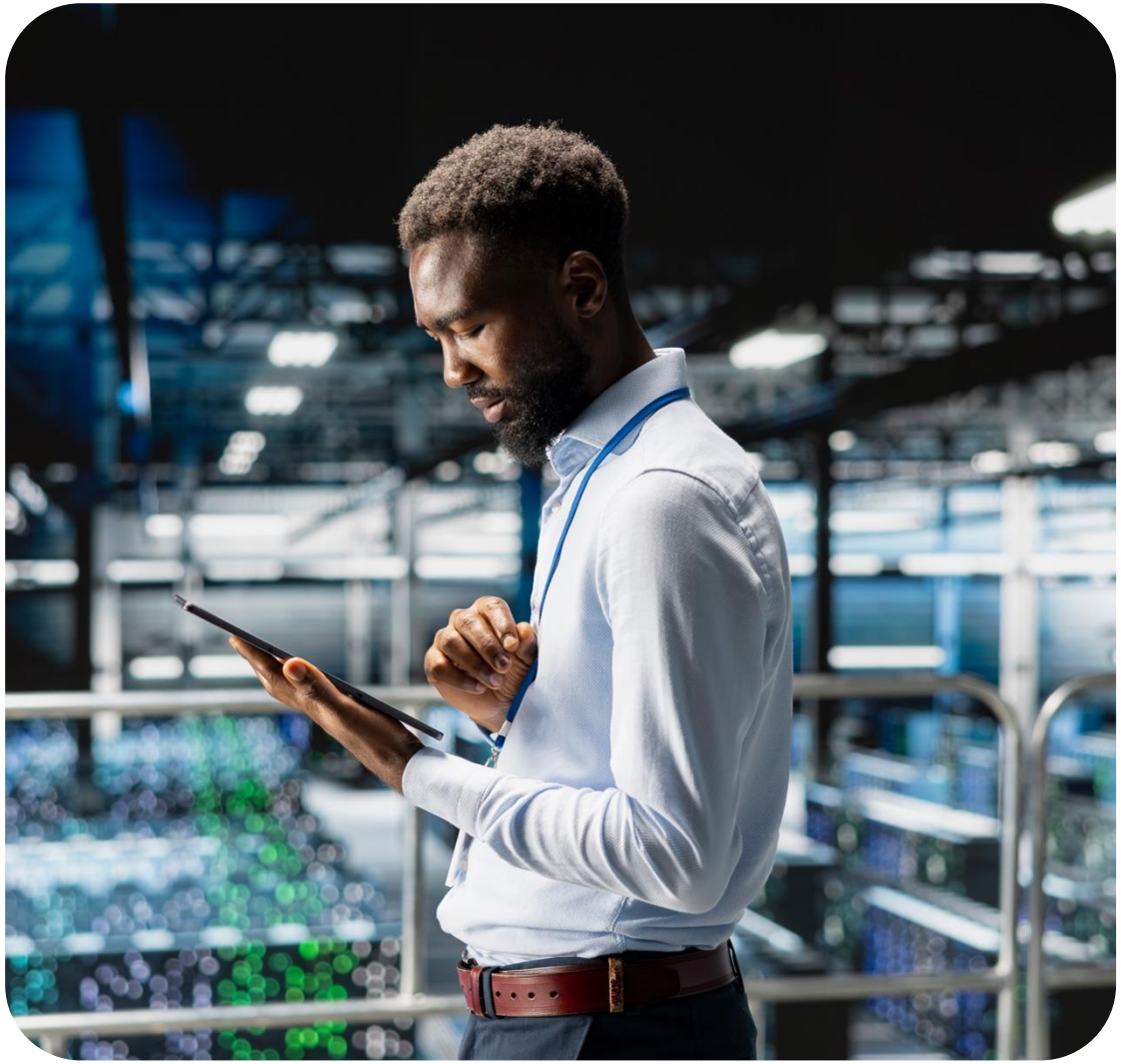
Automating change at scale



Plan checks/
Go-No-Go

Automated
deployment

Post checks

Run compliance
checks (validations)

Automating change at scale



Automated deployment

Post checks

Run compliance checks (validations)

How we solved it





Remediation automation

- Automated deployment of ACL changes
- Thousands of policy updates delivered consistently
- Reduced manual effort and risk

Upgrade automation

- Bespoke pre-check and post-check validation
- Automated go/no-go decision making
- Hundreds of devices upgraded per day

The outcome

Before

Engineers managing change

- Manual changes
- Repetitive operational tasks
- Slow remediation
- Operational bottlenecks

After

Automation managing routine change

- Automated operations
- Faster change delivery
- Greater consistency and compliance
- More time for engineering and innovation

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