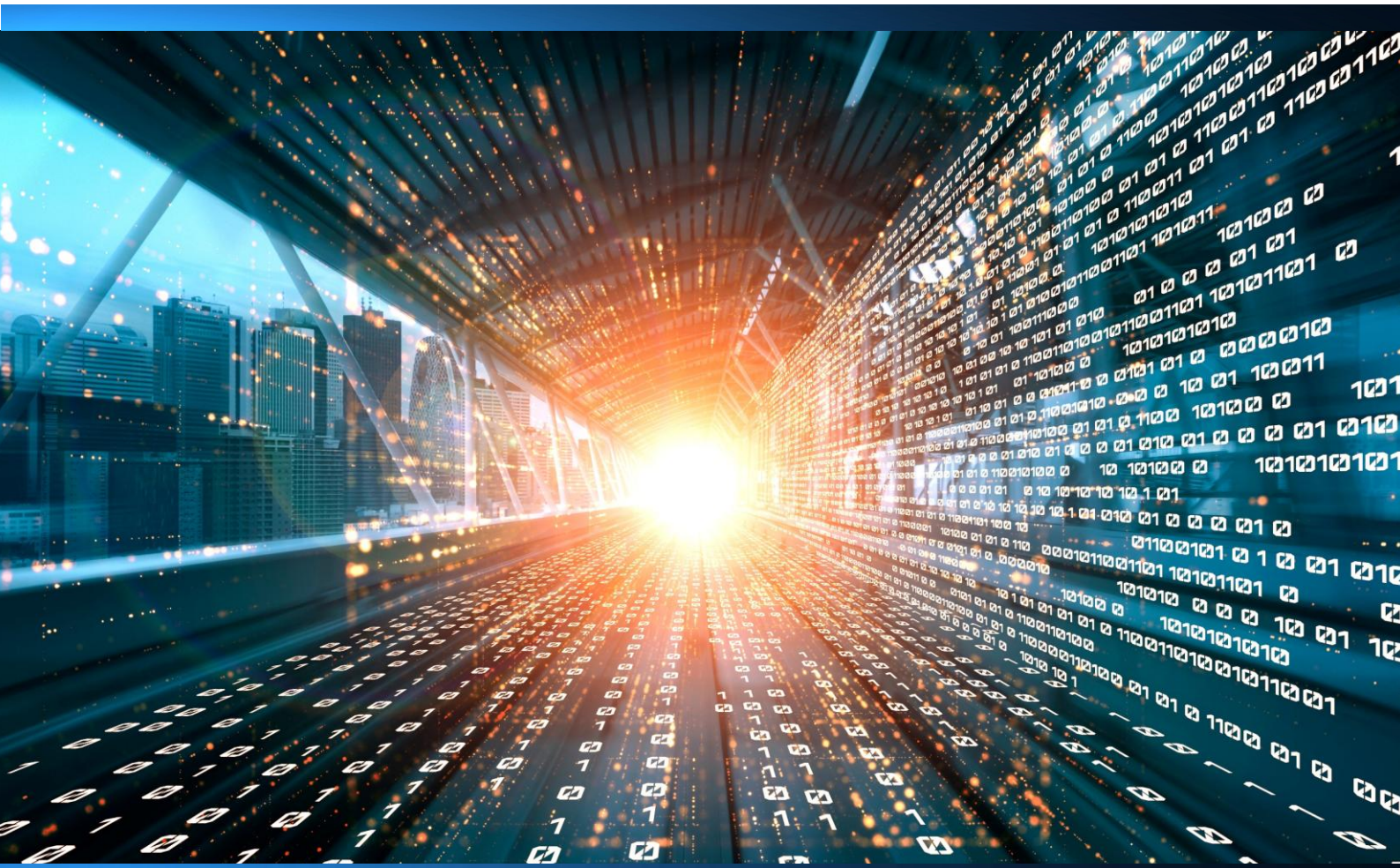
datacentrix

Operational Technology

Resilient OT Network Security & Defence



Confidential
This document is confidential and intended for the use of the distribution parties only. Any copying or dissemination of this document is strictly prohibited.
© 2026 Datacentrix (Pty) Ltd

Secure your production environment with Datacentrix's Operational Technology (OT) Network Security. Implement industrial firewalls, network micro-segmentation and virtual patching to protect mission-critical ICS and SCADA systems without disrupting uptime.

1. Safeguarding the Connectivity of Industrial Operations

In the era of Industry 4.0, the deepening integration between Information Technology (IT), cloud services, and industrial networks has revolutionised production. However, this connectivity removes the traditional "air gap," exposing Industrial Control Systems (ICS) to sophisticated cyber threats. Protecting the IT/OT boundary is no longer just about blocking access; it is about ensuring uninterrupted business continuity. Datacentrix provides a comprehensive suite of industrial network security solutions designed to defend Cyber-Physical Systems (CPS) throughout their entire lifecycle. Our approach prioritises operational efficiency, utilising ruggedised hardware and OT-native intelligence to secure your environment without impacting network performance.

2. Purpose-built for Industrial Edge Defence

Standard enterprise firewalls often become performance bottlenecks in a factory setting. Our industrial-grade security appliances are engineered for the harshest environments, providing:

- **Robust industrial design:** Fanless, ruggedised appliances built to withstand extreme temperatures, vibration and electrical noise commonly found in field networks.
- **Deep packet inspection (DPI) for OT:** Native support for over 80 industrial protocols (including Modbus, EtherNet/IP, CIP and S7Comm), providing payload-level visibility and control over operational commands.
- **Fail-safe continuity:** Advanced hardware bypass and high-availability mechanisms ensure that even in the rare event of a hardware failure, production traffic continues to flow without interruption.

3. The Business Case: Continuity, Visibility and Control

For industrial organisations, network security is the foundation of digital empowerment. Our solutions-driven architecture delivers strategic outcomes for business stakeholders:

- **Containing lateral movement:** This is achieved by dividing production environments into secure zones and conduits. By implementing network micro-segmentation, we prevent a single compromised device from impacting the entire facility, effectively limiting the "blast radius" of any security incident.
- **Virtual patching for unpatchable assets:** Many critical OT assets cannot be taken offline for patching or run on legacy software. Our OT-centric Intrusion Prevention Systems (IPS) act as a protective shield, blocking exploits at the network level and extending the life of your capital equipment.

- **Autonomous security calibration:** Leveraging AI-driven rule learning, our systems can automatically curate security policies based on baseline traffic behaviours. This reduces manual administration and accelerates the transition from staging to full production.

4. Realising Smart Operations: Practical Use Cases

To help you achieve a competitive advantage, here is how Datacentrix applies our network defence technologies to solve complex operational challenges.

4.1 Building a secure industrial demilitarised zone (DMZ)

- **The challenge:** Connecting small, distributed industrial sites (such as utility substations or remote control units) to the enterprise network often introduces WAN-based risks.
- **The solution:** We deploy industrial next-generation firewalls as secure DMZ gateways. These appliances manage encrypted VPN connections and filter traffic flowing between the WAN and production field, ensuring seamless but highly secure remote management.

4.2 Micro-segmentation for production line resilience

- **The challenge:** A modern shop floor often has hundreds of connected PLCs and sensors. Without internal barriers, malware can spread laterally between production lines, leading to total factory shutdowns.
- **The solution:** We utilise high-port-density IPS appliances to segment the backbone network. By monitoring "east-west" traffic between assets, we can identify and block anomalous network behaviours at an early stage, identifying insider threats and anomalous command injections before they materialise into downtime.

4.3 Integrated IT/OT security workflow

- **The challenge:** Security teams often lack visibility into what is actually happening on the factory floor, leading to a "shadow OT" environment that remains unmonitored.
- **The solution:** Our solutions provide an OT-focused dashboard that correlates network intelligence with asset analytics. This provides a holistic view of every connection, data flow and protocol command. By integrating this with your existing SOC/SIEM, we ensure your IT and OT security postures are coordinated and context aware.

5. Fortify Your Operational Resilience

Ensure your network is a catalyst for innovation, not a point of vulnerability. Contact our industrial networking specialists today to discuss how we can implement a Zero Trust framework for your OT environment. Email Karina Geyser, Business Unit Manager: Infrastructure Solutions and Operational Technology at Datacentrix on kgeyser@datacentrix.co.za.

6. National Contact Details

Corporate office
Tel: +27 87 741 5000

Corporate Park North
238 Roan Crescent, 1685
Old Pretoria Road, Midrand

PO Box 50722
Randjiesfontein
Midrand, 1683

Logistics centre
Tel: +27 12 657 5000

26 Landmarks Avenue
Kosmosdal, Extension 11
Samrand, Midrand

PO Box 50722
Randjiesfontein
Midrand, 1683

Coastal

Cape Town office
Tel: +27 21 529 0700

18 Oxbow Crescent
The Estuaries
Century City, 7441

PO Box 181
Century City
Cape Town, 7446

East London office
Tel: +27 43 705 8000

Suite 2, 11 Cavendish Road
Vincent
East London, 5217

PO Box 19066
Tecoma
East London, 5214

Gqeberha office
Tel: +27 41 391 0200

Southern Life Gardens
Ground Floor, Block B, 70 2nd Avenue
Newton Park, Gqeberha

PO Box 63657
Greenacres, 6057

Durban office
Tel: +27 31 389 0500

1st Floor, 30A The Boulevard
Dawncliffe, Westville
Durban, 3629

PO Box 1645
Westville, Durban, 3630

Middle East

Doha office
Tel: +974 4007 1793

Eighteen Tower
Zone 69, Street 303, Building 230
19th Floor, Office 1972
Lusail, Doha, Qatar
PO Box 23107

Rest of Africa

Datacentrix deploys technologies and provides support services to customers across 45 countries in the rest of Africa.

www.datacentrix.co.za