



BARBADOS
PORT INC.

Cybersecurity and AI: Protecting the Digital Port Ecosystem

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Barbados Port Inc.



- Small, multipurpose port handling over 90% of imports.
- Approx 1,100 vessel calls yearly.
- Over 1.1 million tonnes annually.
- Built the Caribbean's first homegrown Maritime Single Window.
- Built our own Port Community System.

Introduction to
**Barbados Port
Inc.**



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The Digital Port Ecosystem: Opportunity and Risk

- Ports are now critical national infrastructure.
- Ports connect shipping lines, Customs, brokers, terminals, public & private sector.
- Cloud platforms, APIs, IoT, online payments, satellite AIS, automation all present attack vectors.
- Disruption impacts trade, supply chains, revenue, and national security.
- Maritime cyberattacks now affect cargo operations, vessel clearance, payment systems and logistics visibility.



The Threat Landscape is Changing

- Ransomware,
- Phishing,
- Credential theft
- Supply-chain compromise

- AI-generated phishing emails
- Voice cloning
- Deepfake executives
- Automated vulnerability discovery
- AI-assisted malware





AI: Doubled-Edged Sword

- Deepfakes
- Prompt injection
- Data poisoning
- Model manipulation
- Uncontrolled use of public AI tools
- Threat detection
- Anomaly detection
- Security monitoring
- Incident response support
- Predictive analytics



Cybersecurity + AI: Built In, Not Bolted On

- Security by design
- Identity and access management
- Segmentation
- Logging and monitoring
- Governance and policy
- Vendor risk management
- AI-assisted vulnerability detection and avoidance
- AI risk assessments
- AI model monitoring



The Human Factor Has Never Been More Important

- Social engineering
- Weak passwords
- Oversharing
- Insider threats
- Deepfake phone calls
- AI-generated spear phishing
- Synthetic identities



password
is
123456



Lessons Learned

- ISP outage affecting PCS/MSW availability
- Government WAN dependencies
- Attempted cyberattacks
- Importance of redundancy and resilience





Regional Collaboration & Maritime Cyber- Resilience

- AI threats scale globally.
- Small ports face the same AI-powered threats as large ports.
- Regional cooperation becomes more important, not less



The Future of AI and Maritime Cybersecurity

- AI-enabled operations
- Digital twins
- IoT expansion
- Autonomous systems
- Zero Trust
- OT security





Key Takeaways

- Digital transformation and cybersecurity must evolve together.
- AI is both a cyber risk and a cyber defense tool.
- Resilience matters as much as prevention.
- People remain the first line of defense.
- Regional collaboration strengthens collective security.



Thank You!

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