wipro

Cyber Safe and Secure Airports

Simplify, secure, sustain with integrated cyber security solutions and services

Airports are increasingly adopting the latest technologies and digital systems to manage their operations better, enhance the passenger experience, and improve overall service quality. Given that airports are critical components of the national infrastructure, they are also a prime target for cyber-attacks. With hundreds of interconnected systems (internal and external), countless networks and endpoints, and varied user bases (employees, contractors, ecosystem stakeholders, and guests), airports present a huge surface area for cyber-attacks. Moreover, the COVID-19 pandemic has necessitated a heightened cybersecurity framework to prevent against threats from phishing, remote working, and hacking. Airports today require integrated cybersecurity solutions and services that span their entire ICT ecosystem to mitigate and eliminate increasing risks of cyber-attacks.

Ransomware disables Cleveland airport's email system, information screens.

Atlanta airport shuts down Wi-Fi following cyber-attack on city

Israeli airports fend off three million attacks a day.

Cyber-attack led to blank information screens at Bristol airport (UK).

New cyber-attacks are hitting airport and metro systems in Ukraine.

How should airports design their security framework?

Airports have a diverse and complex technology infrastructure: internal and external facing applications, third-party applications, IoT and SCADA systems, plus multiple network configurations, including dedicated security networks, mobile, and radio networks to name a few. Airports need comprehensive security interventions for each of these elements. Focused security controls ensure every system in the airport has the right protection level. Wipro has designed a holistic and comprehensive framework that identifies the different cybersecurity controls needed at each layer of the airport stack and corporate functions.

Cyber Security Controls across Corporate and Airport ICT Technology Footprint

Corporate functions

Asset Inventory Management
- Infrastructure Security
- Endpoint Security

Enterprises Resource Planning
- Data and Application Security
- ERP Security

Human Resource Management
- Identity and Access Management
- User Access Governance

Governance
- Data Privacy and Protection
- Risk and Compliance

Procurement Management
- Application Assurance
- Data Security

Financial Management
- Application Security
- Data Security

Policy Management
- Threat Management
- Governance

Core functions

Airport User Interface / Front End

Mobile Apps and End-user Devices, Web / E-service, Digital Commerce Platform, Artificial Intelligence, Facial Recognition System, Omni Channel Platform, Airport Integration Hub for End-to-End Services

- Data Privacy & Protection
- Data & Application Security
- Identity & Access Management
- Risk & Compliance
- Security Assurance
- Digital Identity
- Cloud Security

Passenger Processing & Baggage Reconciliation & Baggages Handling Systems

CUPPS, CUSS , SBD, SBG, Biometrics - One ID, BRS, IATA 753 Bag Tracking, BHS, Way Finding Kiosk

- Data Protection & Privacy
- Data and Application Security
- Identity & Access Management
- Threat Management
- End Point Security
- Cloud Security
- OT & IoT Security

Airport Operations Management Systems

AODB - RMS, FIDS, A-CDM, AOCC, ITMB/Middleware, Retail POS, Data Analytics & BI, ERP

- Data & Application Security
- Identity & Access Management
- Data Protection
- Fraud Prevention System
- End Point Security
- Risk & Compliance
- PCI-DSS
- Disaster Recovery Support

Airport Infrastructure and Facilities Management

BMS, CCTV, ACS, PIDS, Video Analytics, FAS, PAVA, Voice Comms, IoT Framework & Sensors

- Data & Application Security
- Risk & Compliance
- Identity & Access Management
- OT & IoT Security

Airport ICT Infrastructure

Internet - VPN, CAT-6-Fiber Optic, LAN-Wi-Fi-WAN, Data Centers, Telco Rooms, Mobile Telephony Towers, RFID, IoT Network

- Infrastructure Security
- Network segmentation
- Firewalls
- Load Balancer
- Proxy
- VPN gateways
- NIPS, NIDS, HIPS, UTM, SIEM
- Private Cloud
- Threat Management

Figure 1: Wipro's cybersecurity framework for airports

Our solutions and offerings for airports

Wipro is a global leader in cybersecurity with a diverse set of service and solution offerings. By combining cybersecurity expertise and deep understanding of the airport domain, Wipro has identified specific solutions for each of the controls defined in the cybersecurity framework (Figure 1) to address airport challenges.

Wipro's holistic solutions address risks, vulnerabilities, and non-compliance to policies across airside, terminal, and landside operations.

They help airport clients achieve, and maintain, the desired state of cybersecurity. Depending on the current state of the airport, the Wipro approach is to build a roadmap that balances the desired target state, cost, time, and the expected security posture.

Wipro's security services can be delivered through a combination of onsite and centralized cyber defense centers.

- Data security architecture, data protection
- Privacy by design
- Data security governance
- Data obfuscation & tokenization
- Managed PKI and encryption

Data privacy & protection

- IT risk and control design assessments
- Third-party risk management
- IT risk office management
- ERP security
- Regulatory compliance

Risk and compliance

- Identity governance & administration
- Password-less &frictionless authentication
- PIM /PAM
- Online identity fraud detection
- Digital identity proofing & validation

Identity and access management

- SIEM /SOC SOAR
- Threat intelligence, incident response and deception
- Application securty, threat modelling, secure code reviews
- Threat life cycle management
- DevSecOps

Security intelligence, analytics & assurance

- Antivirus, anti malware
- Data leak prevention
- File integrity monitoring
- Host intrusion prevention system
- Encryption

End point security

- Security architecture network segmentation assessment & design
- End point protection
- Zero trust network
- Software defined security architecture
- Advance threat protection & App. control

Infrastructure security

- Cloud native security controls and postures management
- Containers, microservices and serverless security
- Zero trust and microsegmentation
- SaaS security
- Cloud workload protection

Cloud security

- Device security
- IT-OT integration risk assessment IT-OT integrated SOC
- OT security design
- SB 327 complience
- OT vulnerability management, OT anomaly detection

OT and IOT security

Figure 2: Wipro's solutions for enabling each cybersecurity control

Benefits and features

- Improved security posture for the airport
- Single pane of glass view: Wipro Security Management Center
- Institutionalized Security Operations Center: Wipro's Cyber Defense Centers
- Predictive, responsive and integrated threat intelligence and management
- IT risk governance and compliance
- Vulnerability assessment and countermeasures management
- Prevention of service interruption, improved business continuity
- Cost savings and ROI: Security as-a-Service

Case study

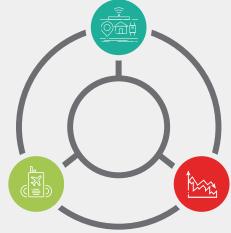# Providing end-to-end IT security services at a large North American airport

For one of the largest airports in North America – serving over 45 million passengers each year – Wipro designed and delivered an integrated IT security solution to significantly improve the facility's security operations. The solution addressed a huge number of security needs: IT risk and compliance, IT disaster recovery support, infrastructure security (network and endpoint), vulnerability management, security monitoring, security orchestration, incident management and interactive investigation through security operations platform, and continuous monitoring of the external digital profile across the clear, deep, and dark web through a threat intelligence platform and security information and event management. Wipro's Security Management Center (SMC) drives the security operations.

With Wipro services, the airport saw improved effectiveness of security tools with an upgraded technology landscape. Wipro ensured policy compliance across the landscape through complete asset discovery and stringent enforcement of security base-lining standards.

Key takeaways

Secure airside, landside, and terminal operations through customized security controls and solutions for the airport and aviation industry.

End to end integrated cybersecurity solutions covering IT, OT & IoT across systems and functions

Simplified legal and regulatory compliance, with real-time visibility into airport security posture

Lower business risks, increased business continuity, data and critical system protection through efficient response and recovery

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Wipro Limited (NYSE: WIT, BSE: 507685, NSE: WIPRO) is a leading global information technology, consulting and business process services company. We harness the power of cognitive computing, hyper-automation, robotics, cloud, analytics and emerging technologies to help our clients adapt to the digital world and make them successful. A company recognized globally for its comprehensive portfolio of services, strong commitment to sustainability and good corporate citizenship, we have over 190,000 dedicated employees serving clients across six continents. Together, we discover ideas and connect the dots to build a better and a bold new future.

For more information,
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