

## Securing the Digital Heart of a Global Aviation Hub Beijing Capital International Airport

As one of the world's busiest aviation hubs, Beijing Capital International Airport operates on uninterrupted data flow. The establishment of two new core data centers introduced a critical management challenge: ensuring absolute, 24/7 reliability for the systems that control flight information, passenger services, and security operations.

### Key Challenges:

- **Fragmented Visibility:** Managing two separate facilities without a unified view of environmental health and critical equipment status.
- **High-Stakes Risk Exposure:** Potential failures in UPS, Precision Cooling, or undetected environmental threats (leaks, smoke) posed an unacceptable risk to airport operations.
- **Complex Integration Needs:** The solution needed to seamlessly integrate diverse systems—from smart device protocols to sensor networks—and connect to the airport's existing central management platform.



**The Goal:** Implement a centralized, intelligent monitoring system that would provide complete situational awareness, enable proactive incident prevention, and integrate smoothly into the airport's broader operational ecosystem.

### Omara Solution: A Unified, Intelligent Monitoring Command Center

Omara delivered a comprehensive, three-tiered monitoring platform designed as the central nervous system for the airport's new data centers.

### The implemented solution provided:

1. **Holistic, Centralized Monitoring:** A single platform unifying the management of precision air conditioning, UPS, temperature/humidity, water leaks, smoke, infrared intrusion detection, access control, and video across both facilities.
2. **Seamless Integration & Custom Development:** Using a core monitoring server, we aggregated data from all sensors and, through custom protocol development, ingested real-time operational data from intelligent devices like UPS and air handlers. A custom upstream interface was developed for successful integration with the airport's central Operations Management Platform.
3. **Proactive Intelligence & Visualization:** The central management platform provides an intuitive, real-time dashboard. It transforms raw data into actionable insights, delivering immediate visual and audible alerts for any anomaly, enabling engineers to preempt issues before they impact operations.



## The Result: Unshakable Operational Confidence and Streamlined Management

The system, operational since April 2023, has fundamentally transformed the management and security of the airport's critical IT infrastructure.

### Tangible outcomes delivered:

- **Achieved Centralized Command:** Successfully unified the monitoring of two critical data centers onto a single, intuitive platform, eliminating blind spots and simplifying oversight.
- **Enabled Proactive Safeguarding:** Real-time alerts for environmental and equipment anomalies have dramatically reduced risk, preventing incidents that could threaten the continuity of airport services.
- **Delivered Flawless Integration:** The custom-developed interface ensured a smooth and successful integration with the airport's existing management ecosystem, validating the solution's adaptability and technical prowess.
- **Provided a Complete, Turnkey Success:** By offering a comprehensive "one-stop" solution—from design and custom development to integration—we ensured a smooth project delivery, allowing the airport's team to focus on their core operational missions.

In summary, Omara provided Beijing Capital International Airport with more than a monitoring system—we delivered operational resilience. The solution stands as a vigilant guardian of the airport's digital infrastructure, ensuring that the data powering this global gateway flows without interruption.