

Access Management and Multi-Factor Authentication

Thales helps OneSKY secure privileged user access to new air traffic management system

About OneSKY

The OneSKY Australia Program is a partnership between Airservices Australia and the Australian Department of Defence to deliver a modern, resilient, secure air traffic management service which unites both civil and military systems.

Developed by Thales, the new Civil Military Air Traffic Management System (CMATS) will replace the current independent civil and Defence air traffic management systems. The OneSKY Program will place Australia in a good position to meet future air traffic requirements, maintain and improve defence capability, continue to meet national security measures and allow all airspace users to leverage environmental, capacity, efficiency and capability benefits.

Business Challenge

The OneSKY Program is the most complex transformation of air traffic management in Australian aviation history, delivering more than \$1.2 billion of estimated economic benefits to airspace users over 20 years.

No other country has united civil and military air traffic management systems on the scale required by Australia, who manage 11% of the world's airspace.



The next generation Civil Military Air Traffic Management System will provide:

- Centralised Collaborative Command and Control: a national approach to the oversight and operation of Australian airspace for both military and civil use
- Broad Utilisation of Workforce: flexibility for air traffic controllers to move easily between positions, geographical areas and work groups
- Optimised Network and Flight Efficiency: a more flexible airspace construct to enable better management of traffic volumes for both military and civil operations

For Australian airspace users this means:

- Uninterrupted service provision for all portions of Australian airspace, improving resilience for unplanned events and optimisation of resources
- Greater access to available airspace, enabling optimal use of airspace, better fuel planning, preferred routes and optimal flight levels.
- Trajectory Based Operations where airspace users can plan their arrival using continuous descent from cruise to touchdown, enabling a decrease in noise, fuel saving and carbon reduction opportunities
- Airspace users will have increased availability to fly preferred routes to suit their needs.
- A trusted and seamless flow of information between civil and military air traffic control agencies, improving operational efficiency of Australian airspace.
- Improved resilience for unplanned events, enabling the industry to optimise resources in times of disaster, leading to a reduction in travel delays and improved accuracy in flight times



Technical Challenge

As the design authority for the Civil Military Air Traffic Management System, Thales was required to allow privileged users to securely access the system. This posed a number of technical challenges:

- The new air traffic management system is going to be installed in various physical locations which the privileged users of the system must be able to securely access from different designated locations
- Parts of the IT infrastructure are interconnected via a secure network while parts of it are air-gapped
- The solution must provide a consistent user experience for all privileged users and must integrate with other components of the system such as user stores and certificate authorities.

Solution

To meet this challenge, Thales determined the best solution to meet the needs of the OneSKY Program would be an Access Management and Multi-Factor Authentication (MFA) solution that uses PKI (asymmetric Public and Private Keys) to authenticate the privileged users. The private key always stays in the secure element in the smart card, while the public key certified by an approved and known certificate authority would be distributed. Users authenticate by signing a challenge using the private key and this signature can only be verified using their legitimate public key.

OneSKY will use a Thales management system to register their cards in the system, issue cards for privilege users and place user certificate on the cards. This system also helps with the renewal, revoking, locking or unlocking the cards or issuing temporary cards for users.

Result & Benefits

Thales' solution will enable the OneSKY Program to meet access security requirements while enhancing the security of user authentication using Multi-Factor-Authentication (MFA). This solution will integrate with their current user store and also certificate authority and PKI infrastructure.

Users will use their smartcards for MFA but also use them for physical identification purposes. The Thales card management system is also designed to be user friendly and provides a means to manage smartcards in-house such as loading certificates or changing PINs using the self-service feature of this system.

Business Need:

Allow privileged users to securely access the next generation Civil Military Air Traffic Management System from multiple locations via secure interconnected and air-gapped networks while providing a consistent, easy to use end user experience.

Technology Need:

- Solution to provide secure access to privileged users of the new air traffic management system
- An easy to use card management system

Solution:

- Thales Access Management system, card management system IDPrime smartcards

Result:

- A secure access management solution to meet the Customer's business and security requirements

About Thales

The people you rely on to protect your privacy rely on Thales to protect their data. When it comes to data security, organizations are faced with an increasing number of decisive moments. Whether the moment is building an encryption strategy, moving to the cloud, or meeting compliance mandates, you can rely on Thales to secure your digital transformation.

Decisive technology for decisive moments.