

# Product brief: CADIR

## ATN directory

The European Directory Service (EDS) is intended to provide a centralised management and automated distribution of information in support of ATN applications. CADIR is the flexible solution for implementation of directory services in a managed, distributed environment such as EDS. In support of a wide range of standardised protocols, CADIR integrates perfectly with the global directory service, as well as with local applications.

## Key features

### Interoperability

CADIR supports a wide range of standard protocols for user access and data retrieval as well as replication. Since the development of the EDS operational concept CADIR has been the driving force and central element in validation of the concept and in evaluations with third parties.

### Enabler for AMHS extended level of service

The use of directory services is the key element in the Extended ATS Message Handling Service (ATSMHS). Today AMHS has become the first ATN application to use EDS, supporting a centralised management and providing automated distribution of information. However, EDS and CADIR are not limited to AMHS.

### Built-in support of security

Security has become a ubiquitous challenge. But CADIR is the perfect candidate for securing information, to facilitate a global authentication and authorisation scheme, or to support the establishment of a Public Key Infrastructure (PKI), required by ATN applications or the System Wide Information Management (SWIM).

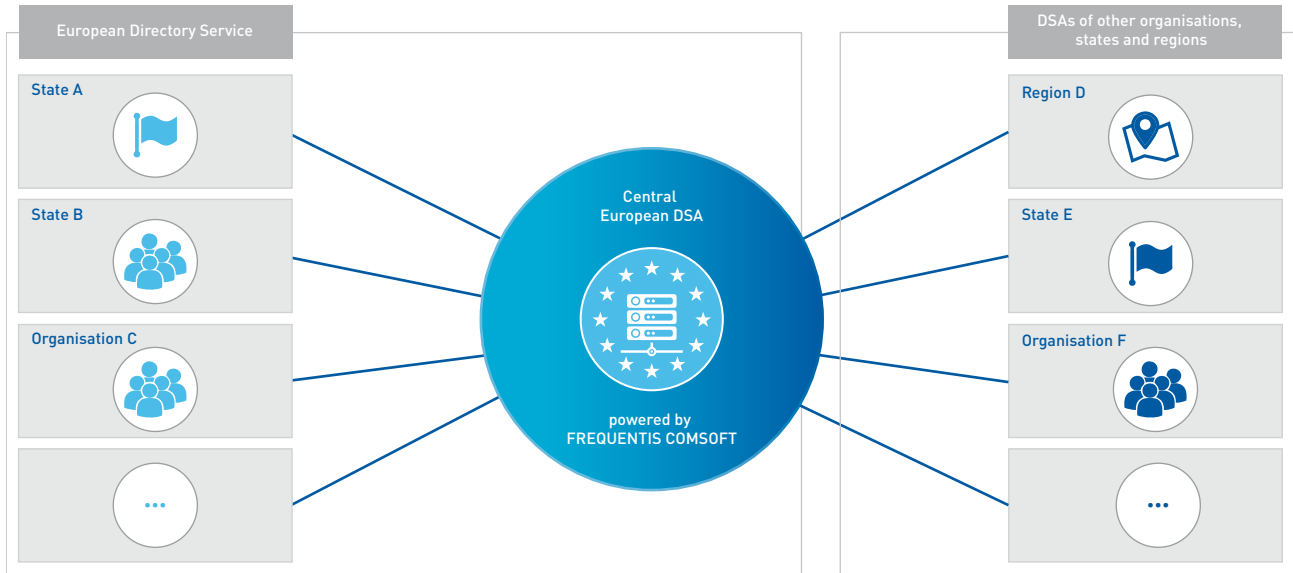
### Modern, fault-tolerant and extensible

CADIR is an up-to-date ATN application running on several operating systems and even in virtualised or redundant environments. The graphical, web-based human machine interfaces (HMIs) just need a web browser to run. Once new requirements emerge, the structure and contents of the directory can be adjusted and extended as necessary.



## CADIR at a glance

- Proven solution for the ICAO ATN Directory and European Directory Service (EDS)
- Centrepiece of the EDS
- Improves level of automation as well as the availability and quality of data
- Enabler for future authentication and authorisation schemes and for securing information
- Web-based user front ends for data management and administration
- Compliant to ICAO, ISO/IEC, ITU-T and internet standards



EDS for a centralised and automatically coordinated information management of European air traffic

## Benefits

The European Directory Service (EDS) provides a centralised management and automated distribution of information in support of ATN applications.

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### Market-proven solution

CADIR combines the advantages of a commercial off-the-shelf (COTS) product with Frequentis Comsoft's ATM knowhow. The CADIR package has been selected for the core component of EDS as well as by many ANSPs.

### Standard compliance

The CADIR solution is compliant with related international, regional and domain-specific standards including the ITU-T and ISO/IEC X.500 series, Internet standards, ICAO Doc 9880 and EUR AMHS Manual (ICAO EUR Doc 020), making integration straightforward.

### Increase of data quality

In the implementation of EDS, CADIR replaces manual, error-prone activities with automated processes. Advancing the level of automation reduces the number of human interactions and consequently increases the availability and quality of data.

## Facts and figures

Standards	ICAO Doc 9880, Second Edition (2016), Part IV; ICAO EUR AMHS Manual, Version 14.0, Appendices G, G-A, G-B and G-C; ITU-T X.500 series; ISO/IEC 9594 set of standards; ACP 133; RFC 1777 and RFC 4510 (among others)
Protocols	Vast protocol support to interface the ATN directory/EDS by X.500 standard protocols including Directory Information Shadowing Protocol (DISP) and by other means (e.g. LDAPv2, LDAPv3, XLDAP, XDAP, SOAP)
Structure	User-extendable directory structure and schema
Architecture	Fully redundant architecture (active/standby)

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