





ECCAIRS 5 – Technical Course

Server Installation and Configuration




Uniting Aviation
On
Safety | Security | Environment






Minimal System Requirements

Common (Hardware and Software)

- Intel or AMD, 2 GHz or higher, dual core recommended
- 2 GB RAM or more
- 250 MB disk space
- Suitable Microsoft Windows version
- Microsoft .NET Framework 4




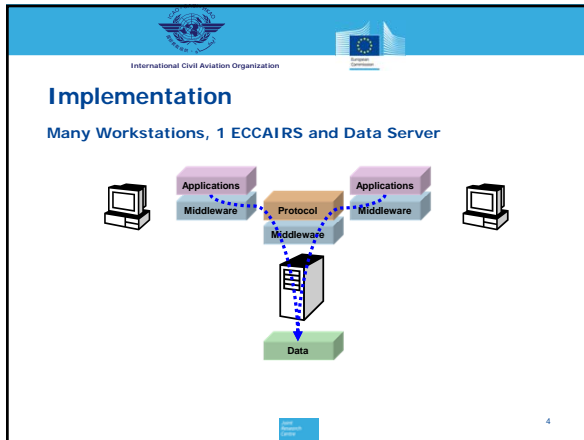



Minimal System Requirements

Server side

- 4 GB RAM or more
- In multi-user systems with large amount of data, multi-processor systems are recommended to increase response times from database and from server
- Web Services and/or DCOM (no protocol needed for standalone install)
- 350–500 MB disk space for database components
- Up to 300 KB database space per occurrence
- The *Attachment Management* has additional requirements (see documentation)





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Server Installation and Configuration

Software

- Microsoft .NET Framework 4 (Full)
- Microsoft SQL Server 2008 R2 Express Edition with Management Tools
 - Mixed Mode authentication
 - Surface Area Configuration (local & remote connections)
 - Server Configuration Manager (ports, protocols)
- ECCAIRS System
 - ECCAIRS Common Framework (ECF) in **Server mode**
 - Transport Domain Taxonomy
 - Aviation Extension for ADREP occurrences

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Server Installation and Configuration



Database

- Creation of database, data owner (i.e. "user") and data tables
 - Needs script from ECCAIRS System installation
 - Script is included in "extension"

Communication Protocols

- Needed for providing access to Repository from LAN or Network
 - Web Services and/or DCOM
- No configuration needed for local connection (stand alone)

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Communication – Web Services

Ports and Base Address

- Configuration of 'E5WindowsServer.Config' file
 - Setting of HTTP and net.tcp ports (needed below)

Firewall

- Inbound only
- Configuration of Eccairs 5 Windows Service Server component ('E5WindowsServer')
 - Setting of ports (TCP, UDP, Ranges) and profile (Private, Public, Domain)
- Configuration of HTTP and net.tcp ports (see above)
 - Setting of ports (TCP, UDP, Ranges) and profile (Private, Public, Domain)

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Communication – Web Services


Windows Service

- Eccairs 5 Windows Service Server
 - Startup type → Automatic

Can run parallel to DCOM

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Communication – DCOM

For compatibility purposes

- Was only option available in Eccairs 4

Windows Account



- Creation of 'E5Administrator' user
 - Account may appear on Welcome screen (registry setting to avoid this)
- Group membership
- User rights

Configuration

- Via 'DCOMCFG' application
- Configuration of Eccairs 5 Repository Services component ('E5RSServer') – requires 'E5Administrator' user

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Communication – DCOM

Firewall

- Configuration of **Eccairs 5 Repository Services** component (**ESRSServer**)
 - Inbound only
 - Setting of ports (TCP, UDP, Ranges) and profile (Private, Public, Domain)
- TCP Port 135
 - Inbound only
 - Setting of ports (TCP 135, Range) and profile (Private, Public, Domain)

Can run parallel to Web Services

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Repository Configuration – Initial steps

Install the 'Organisation ID'

- Certifies the organisation in the system
- Stored in a "certificate"
 - Mandatory: without a certificate, the system does not work
 - Issued by JRC, unique for each organisation

Set up the Database connection

- One per repository
 - Other database? Other repository!
 - Independent of **Attachment** configuration

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Repository Configuration – Initial steps

Install the Taxonomy

- Physical Taxonomy
 - Database definition, Query Language interpreter, language neutral (linguistically spoken)
- Taxonomy (aka Logical taxonomy)
 - Domain specific (ADREP for aviation, ...)
 - Can contain multiple working languages
- Physical and Logical taxonomy are closely related
 - Dependency given by first 3 version indicators: "A.B.C.d"
 - Development progress given by last version indicator: "a.b.c.D"

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Repository Configuration – Initial steps

Taxonomy – Optional steps

- Taxonomy customisation
 - Customisation to standard taxonomy, contains multiple working languages, performed with **Taxonomy Designer** (separate application)
 - Based on same version of physical and logical taxonomy
- Data conversion rules
 - Part of "extension"
 - Provided by JRC
 - Configures conversion of data between different releases of same taxonomy, applied dynamically


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Repository Configuration – Profiles

Set up the Mandatory Profiles

- Browser
 - Configures Eccairs 5 Browser application
- Security
 - Sets access permissions on occurrence and attributes
- Views
 - Defines data allocation on screen, report and Web interface
 - Configuration performed in **View Designer** and **Section Designer** (separate applications)


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Repository Configuration – Roles and Users



Set up Roles

- Mandatory
 - Defines a common set of profiles and behaviour for groups of users

Set up Users

- Mandatory
 - Defines who has factually access to a Repository


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Repository Configuration – User Types

Eccairs user

- Known only to Repository

Windows user

- Authenticates using defined Windows account and Domain
- Repository must know its name



Windows group

- Authenticates using Windows Groups assigned to defined Windows account and Domain
- Repository must know its name

Configured via

- Roles – Cannot assign individual profiles and/or behaviour

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Repository Configuration – Profiles

Mentionable (and optional) ones

- Query
 - Configures **Query By Date** and **Query By Example** options for ECCAIRS 5 Browser
- Conditional Views
 - Configures visibility of views and of sections within a view
- De-identification
 - Establishes what values are removed during export
- Data Manager
 - Defines options available in **Eccairs 5 Data Manager** application

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Repository Configuration – Sub-Repository

What is it

- Repository within Repository
- Inherits main settings from parent Repository
 - Taxonomy, Attachments, Profiles
- Roles are inherited from higher level(s) if enabled
 - Can be specified at each level
- Users are not inherited
 - Must be specified at each level

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Repository Configuration – Sub-Repository

Purpose

- Defines a custom Repository for departments/offices with organisation
 - Coders, Reviewers, Guests
- Visibility restrictions may apply to data
 - Everyone is "connected" to the same database
 - Occurrence Filter used to limit what users are allowed to see

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Repository Data – Additional Functions

Indexing

- Handles indexing of occurrences for querying purposes
- Can occur at a later stage (postponed indexing)
 - Delays update of "index tables" in respect to saving occurrence
 - Speeds up loading of bulk occurrence data
- Based on **Eccairs 5 Insert Postponed Services** component
 - Not active by default, must be started

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Repository Data – Additional Functions

Export & Import

- Configuration Data
 - Repositories
 - Profiles

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Repository Data – Additional Functions

Automatic Backup

- Creates backup copies of occurrences
 - Defined per Repository, backs up sub-repository data also
 - Stored in separate area in database
 - To save to file, needs **Eccairs 5 Backup Service** component
 - Not active by default, must be started
- Configuration options to be enhanced in the future

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Repository Data – Additional Functions

Query Libraries

- Sets one or more default Query Libraries for connecting users
- Linked to a specific profile
 - Query Library

Other interesting ones

- Free discussion

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Additional Software (optional)

TaxDes – Taxonomy Designer

- Comes in 4 different flavours
 - Viewer, Value Manager, Translator, Customisation
 - Install *Customisation* – manages custom attributes and values

SectionDes – Section Designer

- Design Sections for View Designer
- Design Query-By-Example forms

ViewDes – View Designer

- Design Views

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