

EXERCISE 1

Installation of ECCAIRS Client.

PURPOSE AND OBJECTIVE

The user will learn to install an ECCAIRS Client from scratch that accesses a Repository on an ECCAIRS Repository Server located in the corporate LAN. The objective is to acquire the necessary expertise for installing and testing the proper installation of a client workstation within a company LAN.

WHAT YOU NEED

1. A PC with the required characteristics, the
2. ECCAIRS Software Installation Manual (**SIM**), an
3. ECCAIRS installation CD, and
4. An ECCAIRS Repository Server in the LAN (previously installed).

POSSIBLE SOURCE OF ERRORS

1. The SIM describes different roadmaps and points out which chapters must be stepped through in order to fully install the selected version of the program. Some variations are not described as a roadmap option. The roadmap for installing a Client connecting to a remote Repository is **Chapter 3 → Chapter 4 → Chapter 11**.
2. After installation, the operator must create a link to the repository (Chapter 11). At this stage, a password must be entered by the operator. This password is the one assigned to a special user account of the Repository Server ('E4Administrator' – Chapter 8). If the operator fails to connect with this password (assuming that it is correct), then either the user account or DCOM is not configured properly on the Repository Server.

ACTION

1. Insert the ECCAIRS CD in the suitable drive.
The installation helper should automatically start. If this is not the case, click on the **Start** button, click on **Run...**, and enter "D:\ExxxSETUP.EXE" (without quotes, "D:" is the letter assigned to the CD drive, "xxx" is the release indicator). Click **OK** to accept and start the installation helper. You can alternatively use the **Browse...** button to search for that program on the CD drive.
2. During chapter 11, connect to the Mentor's Repository. This repository is located on a "Microsoft Windows Network" computer.
The computer name and the password will be given by the mentor.
3. Once in the Browser, run the **SELECT ALL** count. It must match the number given by the mentor. Eventually, execute it and view the result.

EXERCISE 2

Loading data in the ECCAIRS Server so that users can retrieve and analyse data.

PURPOSE AND OBJECTIVE

The user will learn to load data into an ECCAIRS Server using a tool available in the ECCAIRS system. The objective is to acquire the necessary knowledge about tools and the purpose and benefits of those tools. The user will also learn the meaning and use of E4F ECCAIRS occurrence files.

WHAT YOU NEED

1. An existing ECCAIRS Repository Server.
2. An E4F occurrence file.

POSSIBLE SOURCE OF ERRORS

1. The E4F Loader tool allows the user to set parameters that the application will use during the process of uploading occurrences into the database. In the event, these parameters can, if set improperly, cause data loss. For instance, if the occurrence is available in both the database (where it is more recent) and the E4F file, and the user decides to overwrite the occurrence.
2. Only files produced by ECCAIRS 4 can be used. ECCAIRS 3 files (EDF) cannot be used, and must be converted by a proper *Mephisto* project.

ACTION

1. Start the E4F Loader and connect to the Repository used in Exercise 1.
2. The name and location of the E4F file will be given by the mentor.

EXERCISE 3

Building and executing a query with the Browser.

PURPOSE AND OBJECTIVE

The user will learn to create, execute and save a Query. The objective of this exercise is to understand the Queries, the Query Libraries, and the query parameters.

WHAT YOU NEED

1. An existing ECCAIRS Repository Server.
2. An existing ECCAIRS Client (i.e. same workstation).

POSSIBLE SOURCE OF ERRORS

1. The query parameters can be added rapidly by entering the Attribute ID in the definition dialogue box. In some cases, the same attribute ID is also used in another branch of the occurrence attribute tree.
For instance, "0021" is the attribute of the "Aircraft Make/Model". This ID is used in the "Separation-Aircrafts" branch as well as in the "Aircraft-Aircraft identification" branch. The query will not only store the ID but also the path.
In case that the same ID is used twice in the query, take care of selecting the same branch in both cases.
2. The query contains mutually exclusive parameters, or contains a combination of parameters that will never yield a result (for instance looking for "balloons" with "reciprocating engines").

ACTION

1. Run the Browser and connect to the Mentor's repository.
The computer name and the password will be given by the mentor.
2. Create a parameterised query selecting occurrences having two or more aircrafts, one of which is manufactured by Boeing and the other is not manufactured by Boeing, and a State Reporting to be asked every time the query is executed.

EXERCISE 4

Installation of ECCAIRS Stand-alone Server with MSDE.

PURPOSE AND OBJECTIVE

The user will learn to install an ECCAIRS Stand-alone Server from scratch that accesses a local Repository based on MSDE Database Server. The objective is to acquire the necessary expertise for installing and testing the proper installation of a stand-alone workstation.

WHAT YOU NEED

1. A PC with the required characteristics,
2. ECCAIRS Software Installation Manual (SIM),
3. ECCAIRS installation CD.

POSSIBLE SOURCE OF ERRORS

1. After installation, the operator must create a "Data Source" profile pointing to the MSDE instance (Chapter 9, point 4 of "Setting up profiles") on the local PC. No pick list is available.
The necessary values, if not properly written down in the SIM, can be obtained by starting the **ECCAIRS MSDE SQL Server Tool** again: the **INSTANCE NAME** is displayed on top of the tree (and must be entered exactly as it appears, in the form: "name\instance"), the **DATABASE NAME** is displayed in the middle part of the same tree, under the Databases node. (The user ID and password can eventually be reset here)
2. A different data source **TYPE** has been selected.

ACTION

1. Insert the ECCAIRS CD in the suitable drive.
The installation helper should automatically start. If this is not the case, click on the **Start** button, click on **Run...**, and enter "D:\ExxxSETUP.EXE" (without quotes, "D:" is the letter assigned to the CD drive, "xxx" is the release indicator). Click **OK** to accept and start the installation helper. You can alternatively use the **Browse...** button to search for that program on the CD drive.
2. During chapter 11, connect to the computer identified by "(local)". The password is "local".
3. Once in the Browser, run the **SELECT ALL** count. It should return 0 (zero), because...the database is still empty.

EXERCISE 5

Generating data files from the ECCAIRS Server.

PURPOSE AND OBJECTIVE

The user will learn to generate data files from an ECCAIRS Server using a tool available in the ECCAIRS system. The objective is to acquire the necessary knowledge about tools and the purpose and benefits of those tools. The user will also learn the meaning and use of E4F ECCAIRS occurrence files.

WHAT YOU NEED

1. An existing ECCAIRS Repository Server.

POSSIBLE SOURCE OF ERRORS

1. The generated E4F file is too big to be handled by the Browser with acceptable performance. If the number of records is high, consider file splitting.
2. Only files produced by ECCAIRS 4 can be generated.

ACTION

1. Start the E4F Loader and upload data into the Repository used in Exercise 4.
2. Start the E4F Generator, and connect to the same Repository used. This should allow creating a duplication of the original E4F file.

EXERCISE 6

Creation of user accounts in the ECCAIRS Server so that other users can connect for retrieving and saving data.

PURPOSE AND OBJECTIVE

The user will learn to configure an ECCAIRS Server so that it can receive connections from other workstations for access to its local Repository. The objective is to acquire the necessary expertise for configuring a Repository Server and creating user accounts as well as roles.

Note: This exercise makes an MSDE database available to other workstations. The manual states in the introduction that *“Although it is in some event possible, MSDE should not be used as a database server in a workgroup or networked environment.”*. Nevertheless, the purpose of this exercise is not the connection to the MSDE database from a remote workstation, but to the Repository itself.

WHAT YOU NEED

1. ECCAIRS Software Installation Manual (SIM), and
2. An existing ECCAIRS Repository Server with MSDE.

POSSIBLE SOURCE OF ERRORS

1. DCOM is a Windows component. The SIM describes DCOM on Windows 2000 and Windows XP separately. Refer to the correct operating system before continuing. Windows XP Service Pack 2 requires additional configuration. See the addendum at the end of the SIM for details.
2. The SIM does not describe the creation of the special user called “E4Administrator”. This user is not created by the installation. A user with that name may exist in the computer domain, as the result of a good configuration on a domain server where ECCAIRS is installed. This user **must not** be used. ECCAIRS can only use **a local user account**. How do you add this local user? Click on **Start → Settings → Control Panel → Administrative Tools → Computer Management → System Tools → Local Users and Groups → Users**.
3. The special user is not called “E4Administrator”. Its name **MUST** be “E4Administrator”.

ACTION

1. Walk through Chapter 8 of the SIM.
2. Run the Repository Manager. Add, within the database based repository, a **NEW** user account for the student at your left side, using for instance the first and last name. Assign the necessary profiles.
3. Start the Browser, **do not login directly** but add a new link, this time to the computer at your right side. User account and password must be supplied.

EXERCISE 7

Creating a new Browser Application Profile in the Repository Manager and associating it to a user account.

PURPOSE AND OBJECTIVE

The user will learn to configure the Browser Application Profile. The objective of this exercise is to understand the effect of modifications made to the Browser's Interface in the Repository Manager, by looking the result on a workstation. In addition, the user will learn that the some parameters of the Browser Application Profile are linked to parameters set up in other entities, such as Users or Roles.

WHAT YOU NEED

1. An existing ECCAIRS Repository Server.
2. An existing ECCAIRS Client (i.e. same workstation)

POSSIBLE SOURCE OF ERRORS

1. The Browser Application profile is not assigned to the user and/or role or is assigned to a different role/user.
2. The updated profile is downloaded to the workstation only during the connection phase to the repository server. On-line users maintain the settings available during the last logon. To inherit the new settings, the user must close and restart the Browser.
3. The profile definition is saved, but the Repository is not saved.

ACTION

1. Run the Repository Manager.
2. First add a **NEW** Browser Profile. Modify, in the **Edit...** screen, the colours under the **Appearance** section, and the menu functions by tuning the **Denied Operations** section. Associate it to a user.
3. Logon to the Repository with the Browser to see the effect.
4. Execute a **Select All** query and watch the bottom list.
5. Modify the number of fields in the **Occurrence List** section.
6. Logoff from the Repository and log back on.
7. Execute a **Select All** query and watch the bottom again.
8. Add a **Default Occurrence** to the profile.
9. Logoff from the Repository and log back on.
10. Insert a **New** occurrence and watch the input form.

EXERCISE 8

Creating a new Security Profile in the Repository Manager and associating it to a user account.

PURPOSE AND OBJECTIVE

The user will learn to configure a Security Profile. The objective of this exercise is to understand the functionality of this profile, as well as the limitations and caveats of a modified security profile.

WHAT YOU NEED

1. An existing ECCAIRS Repository Server.
2. An existing ECCAIRS Client (i.e. same workstation)

POSSIBLE SOURCE OF ERRORS

1. The Security profile is not assigned to the user and/or role or is assigned to a different role/user.
2. The updated profile is downloaded to the workstation only during the connection phase to the repository server. On-line users maintain the settings available during the last logon. To inherit the new settings, the user must close and restart the Browser.
3. The profile is set to block mandatory fields. In some cases, this can inevitably result in data loss.
4. The blocked data field is still showing on the Browser's interface. *This is not an error*, but a result of the ECCAIRS architecture. As the security profile only blocks the data, it does not impede the Browser from showing the data's on-screen placeholder. The Browser will consequently draw the screen, but not the data.

ACTION

1. Run the Repository Manager.
2. Add a **NEW** Security Profile and go straight to the **New...** button. Build the security profile and finally associate it to a user.
3. Logon to the Repository with the Browser.
4. Execute a **Select All** query.
5. Select the new view
6. Watch the result of the security limitations on the screen.

EXERCISE 9

Creating a new View Profile in the Repository Manager and associating it to a user account.

PURPOSE AND OBJECTIVE

The user will learn to build a View Profile. The objective of this exercise is to understand the functionality of the views, whilst perceiving the complexity of them.

The exercise will not cover all aspects of the views, because profound knowledge is required of not only the Repository's Dictionary but, more important, of the ADREP 2000 Taxonomy on which the ECCAIRS system is based.

WHAT YOU NEED

1. An existing ECCAIRS Repository Server.
2. An existing ECCAIRS Client (i.e. same workstation)

POSSIBLE SOURCE OF ERRORS

1. The View Application profile is not assigned to the user and/or role or is assigned to a different role/user.
2. The updated profile is downloaded to the workstation only during the connection phase to the repository server. On-line users maintain the settings available during the last logon. To inherit the new settings, the user must close and restart the Browser.
3. Topics and sections are inserted at an incoherent position (for instance "injuries" under a topic called "weather").

ACTION

1. Run the Repository Manager.
2. Add a **NEW** View Profile and go straight to the **New...** button. Build the view and finally associate it to a user. Alternatively, import an existing view and modify it to your liking.
3. Logon to the Repository with the Browser.
4. Execute a **Select All** query.
5. Select the new view
6. Insert a **New** occurrence and watch the input form.

EXERCISE 10

Creation of a database link in the ECCAIRS system so that other users connecting to the workstation will be able to retrieve and save data located on a third computer.

PURPOSE AND OBJECTIVE

The user will learn to configure an ECCAIRS Repository Server so that it can receive connections from other workstations for access to its local Repository while using a database being available on another computer. The objective is to acquire the necessary expertise for installing and testing the proper installation of a system composed of clients, a Repository Server and a separate Database Server. The user will also learn the distinction between a Repository Server and a Database Server.

This exercise makes an MSDE Repository Server available to other workstations. Read **Exercise 6** for additional comments.

WHAT YOU NEED

1. An existing ECCAIRS Repository Server.
2. An existing Database Server with MSDE.

POSSIBLE SOURCE OF ERRORS

1. The connection parameters for the Datasource profile are not those for connecting to the remote database server.
2. The Datasource profile is not assigned to the user and/or role or is assigned to a different role/user.
3. The existing Datasource profile is modified and no connection to the local database is possible.

ACTION

1. Run the Repository Manager.
2. First add, within the existing database based repository, a **NEW** Datasource profile connecting to the MSDE instance of the student at your right. Connection parameters must be supplied by that student.
3. Then, add a **NEW** user account for the student at your left side, using for instance the first and last name. Add the newly created Datasource profile. You can optionally use the user created in Exercise 6. In this case, replace the existing Datasource profile with the new one.
4. Start the Browser, and **do not login directly**, but add a new link this time to the computer at your right side.

EXERCISE 11

Creation of a Repository in the ECCAIRS system so that other users connecting to the workstation will be able to retrieve and save data located on a third computer.

PURPOSE AND OBJECTIVE

This exercise is a variation on Exercise 10. The user will learn to configure a **new** Repository on ECCAIRS Repository Server so that it can receive connections from other workstations for access to its local Repository while using a database being available on another computer. The objective is to acquire the necessary expertise for installing and testing the proper installation of a system composed of clients, a Repository Server and separate Database Servers. The user will also learn that one Repository Server can be used in junction with many repositories connecting to a mixed flavour of Database Servers, even though the client can connect to one at a time.

This exercise makes an MSDE Repository Server available to other workstations. Read **Exercise 6** for additional comments.

WHAT YOU NEED

1. An existing ECCAIRS Repository Server.
2. An existing Database Server with MSDE.

POSSIBLE SOURCE OF ERRORS

1. The connection parameters for the Datasource profile are not those for connecting to the remote database server.
2. The Datasource profile is not assigned to the user and/or role or is assigned to a different role/user.
3. The existing Datasource profile is modified and no connection to the local database is possible.

ACTION

1. Run the Repository Manager.
2. First add a **NEW** Repository. Add the necessary profiles, with the Datasource profile connecting to the MSDE instance of the student at your left. Connection parameters must be supplied by that student.
3. Start the Browser, **do not login directly**, but add a new link this time to the computer at your left side.

EXERCISE 12

Locking occurrences with the Browser; browsing batches in the Browser.

PURPOSE AND OBJECTIVE

The user will learn to lock and unlock occurrences, as well as manage batches of occurrences. The objective of this exercise is to understand the meaning of the occurrence lock, of the term “batch” and of the function of the so-called “Super User”.

WHAT YOU NEED

1. An existing ECCAIRS Repository Server.
2. An existing ECCAIRS Client.

POSSIBLE SOURCE OF ERRORS

1. None.

ACTION

1. Run the Browser and connect to the Mentor’s repository.
The computer name and the password will be given by the mentor.
2. Create a query selecting all occurrences from the database and execute it.
3. From the resulting list, select and lock an occurrence.
4. Refresh the display and watch the occurrence(s) locked.
5. Unlock an occurrence locked by you.
6. Unlock an occurrence not locked by you.

EXERCISE 13

Saving occurrences to the database; saving occurrences to file.

PURPOSE AND OBJECTIVE

The user will learn the difference in saving occurrences to the database as well as to [E4F] files. The objective of this exercise is to understand the different data containers that can hold occurrence data, and that these data containers can be used concurrently. This method can for instance be used to make copies of the occurrence records for off-line jobs, and for putting the changes back to the database.

WHAT YOU NEED

1. An existing ECCAIRS Repository Server.
2. An existing ECCAIRS Client.

POSSIBLE SOURCE OF ERRORS

1. Working via an on-line repository on files is restricted by means of a security profile. When working off-line, the same security is applied. If another repository – such as the standard E4F – is used instead, the files are accessed with the security profile contained in that repository. If the security profiles in these two repositories have differences, then the user might have additional rights or – worse – less rights, which could in the event result in data loss.

ACTION

1. Run the Browser and connect to the Mentor's repository.
The computer name and the password will be given by the mentor.
2. Create an occurrence based on personal experience, using one of the views available.
3. Save the occurrence to the database.
4. Duplicate the occurrence and save it this time in a file.
5. Create a query retrieving the occurrence entered by you.

EXERCISE 14

Working with Graphs; managing graph Libraries.

PURPOSE AND OBJECTIVE

The user will learn to create graphs and manage graph libraries. The objective of this exercise is to understand the graph object.

WHAT YOU NEED

1. An existing ECCAIRS Repository Server.
2. An existing ECCAIRS Client.

POSSIBLE SOURCE OF ERRORS

1. The graphs are saved in a container called Graph Library. Saving the graph does not automatically save the library.

ACTION

1. Run the Browser and connect to the local Repository
2. Open the graph library indicated by the mentor.
3. Create 3 new graphs that mimic the 3 graphs contained in the library, using the data available on the local database.
4. Save the library with a new name. You might want to let this library open by another student.

EXERCISE 15

Using the Exporter for exporting data to non-ECCAIRS format.

PURPOSE AND OBJECTIVE

The user will learn to use the Exporter for exporting data from the ECCAIRS system to other types of data. The feature for generating custom report from ECCAIRS data into RTF or HTML is also learned.

The objective is showing the user the possibilities offered by the Exporter.

WHAT YOU NEED

1. An existing ECCAIRS Repository Server.
2. An existing ECCAIRS Client.

POSSIBLE SOURCE OF ERRORS

1. The Exporter uses a special function in the Query Builder, which is the definition of **what** to export (on the **Selections** tab). Opposite of some other applications, where **all** data fields are automatically selected, in the Exporter the operator must specify which attributes must be exported.
2. Some word processors add special markers and tags in the templates, which can tackle the Exporter during the generation of the report.

ACTION

1. Run the Exporter application.
2. Build a Query and establish the Selections.
3. Export.
4. Open a template.
5. Build or use the same query.
6. Export.
7. Open the resulting output file.

EXERCISE 16

Activating a link to the ASYA – Aircraft Statistics and Yearly Summary

PURPOSE AND OBJECTIVE

The user will learn to establish an API link to a separate program in the Repository Manager, and configure the Browser in such way that it can activate the application from a menu within the ECCAIRS system.

The objective is showing the user the possibilities offered by the API for launching a third party application.

WHAT YOU NEED

1. An existing ECCAIRS Repository Server.
2. An existing ECCAIRS Client.
3. The ASYA installation program.

POSSIBLE SOURCE OF ERRORS

1. The entry point requires exact knowledge of the component to be called by the ECCAIRS Browser. Opposite of a pure development environment such as VB or VBA, no pick list is available.
2. The component to be called is not installed on the workstation; therefore upon activation of the calling menu, nothing happens or errors are generated.
3. The component is an external program. Errors in this component must be properly managed, and cannot be trapped by the ECCAIRS environment.

ACTION

1. Run the installation program from the CD
2. Run the Repository Manager.
3. Edit the "Browser" profile.
4. Click the "API Usage" button.
5. Add a new entry in the "Activating Menus".
6. Enter the configuration data found on slide #2 of the **API Configuration** slide show (at the end of the **Presentations** book).
7. Run the Browser application.
8. Load an occurrence.
9. Activate the menu.

EXERCISE 17

Activating a link to the TARGA – Aircraft Registration Database

PURPOSE AND OBJECTIVE

The user will learn about establishing an API link in the Repository Manager that uses the Tunnel Service profile and a flexible and standard component on the Client.

The objective is showing the user the possibilities offered by the API for launching a third party application, that receives occurrence data from the ECCAIRS system and returns a result, in form of occurrence data, back to the same ECCAIRS system.

WHAT YOU NEED

1. An existing ECCAIRS Repository Server.
2. An existing ECCAIRS Client.
3. The TARGA installation program.

POSSIBLE SOURCE OF ERRORS

1. The Tunnel Service profile is not assigned to the user/role. The Browser Application profile is not assigned to the user/role.
2. The entry point requires exact knowledge of the component to be called by the ECCAIRS system. Opposite of a pure development environment such as VB or VBA, no pick list is available.

ACTION

1. Run the installation program from the CD.
2. Run the Repository Manager.
3. Create a new Tunnel Services profile.
4. Enter the configuration data found on slides #3, #4 and #5 of the **API Configuration** slide show (at the end of the **Presentations** book).
5. Edit an existing Browser Application profile.
6. Click the “API Usage” button.
7. Add a new entry in the “Activating attributes”.
8. Enter the configuration data found on slides #6 and #7 of the **API Configuration** slide show (at the end of the **Presentations** book).
9. Run the Browser application.
10. Create a new occurrence.
11. Enter the aircraft registration “TA-RGA”.

EXERCISE 18

Activating a link to the Electronic Media Library of Occurrences.

PURPOSE AND OBJECTIVE

The user will learn to establish an API link to a separate program in the Repository Manager, and configure the Browser in such way that it can activate the application from a menu within the ECCAIRS system.

The objective is showing the user the capabilities of starting a third party application from a menu options instead of data field. It also shows the difference in activating the application in occurrence viewing mode or occurrence editing.

WHAT YOU NEED

1. An existing ECCAIRS Client.
2. The El Melio Connector installation program.

POSSIBLE SOURCE OF ERRORS

1. A Browser profile modified locally is valid up to the moment that the Master Browser profile is modified on the Repository Server. Upon the next connection with the Repository (Logon), the local Browser profile is discarded in favour of the profile from the Repository Server, and local settings are inevitably lost.
2. The entry point requires exact knowledge of the component to be called by the ECCAIRS Browser. Opposite of a pure development such as VB or VBA, no pick list is available.
3. The component to be called is not installed on the workstation; therefore upon activation of the calling menu, nothing happens.

ACTION

1. Run the installation program from the CD.
2. Run the Browser application.
3. Click on "View – Options" menu.
4. Click the "External" tab.
5. Add a new entry in the "Activating Menus".
6. Enter the configuration data found on slides #8 and #9 of the **API Configuration** slide show (at the end of the **Presentations** book).
7. Find the occurrence of the Generator demo.
8. Activate the special menu option.

EXERCISE 19

Activating a link from a third party application to the ECCAIRS system.

PURPOSE AND OBJECTIVE

The user will see how it is possible, using the methods and components of the ECCAIRS API, to connect from a third party application developed in Visual Basic for Applications (VBA)

WHAT YOU NEED

1. Microsoft Excel
2. An ECCAIRS Client

POSSIBLE SOURCE OF ERRORS

1. Accessing programmatically the ECCAIRS environment can cause severe data loss. It is recommended to debug the API program thoroughly in a test environment before going into production.

ACTION

1. Open the Excel workbook indicated by the mentor.
2. Click on the Logon button
3. Click on the remaining buttons
4. Open the Tools → Macro → Visual Basic Editor for viewing the program code.