FUA AMC CADF OPERATIONS MANUAL

Network Operations

Edition: 17.0
Edition date: 10-11-2022
Classification: White
Reference nr:

SUPPORTING EUROPEAN AVIATION

FOUNDING MEMBER OF sesar JOINT UNDERTAKING

NETWORK MANAGER

DOCUMENT CONTROL

Document Title	FUA AMC CADF OPERATIONS MANUAL
Document Subtitle	Network Operations
Document Reference	
Edition Number	17.0
Edition Validity Date	10-11-2022
Classification	White
Accessibility	Internet (www.eurocontrol.int)
Status	Released Issue
Author(s)	G. Van Laethem
Contact Person(s)	K. Pyliser - kristel.pyliser@eurocontrol.int

APPROVAL TABLE

The following table identifies all management authorities who have successively approved the present issue of this document.

This table may be replaced by a format document review and approval meeting, with the meeting details recorded and retained in the edition's archive folder.

The approval may also be recorded via electronic workflow, where put in place. Where document approval is made via a meeting or electronic workflow, the details shall be indicated here in place of the approval table.

Edition approved for publication on 13/10/2022.

EDITION HISTORY

Edition No.	Validity Date	Author(s)	Reason
7.0	15/01/2016	SWE	Review of role naming conventions
8.0	10/02/2016	SWE	General review and adding FTIs
9.0	16/03/2017	SWE/DEC	General review & update
10.0	12/11/2018	SWE/DEC	General review and adding FTIs
11.0		SWE/DEC	General review & update
12.0	30/06/2020	GVL/DEC	General review & update
13.0	28/08/2020	GVL/KPY	General review & update
14.0	21/04/2021	GVL/KPY	General review & update
15.0	27/10/2021	GVL/KPY	General review & update
16.0	15/02/2022	GVL/KPY	General review & update
17.0	**10/11/2022**	**KPY/ANEMEC**	**General review & update**

EDITION CHANGE RECORD

Title	Amendment notes
1. INTRODUCTION	
2. PROPOSED AMC WORKING PROCEDURES	**2.1.2.3 Simultaneous UUPs**
3. CADF WORKING PROCEDURES	
4. FUA-RELATED CACD DATA	**4.1.9 Airblocks – Feet concept** **4.5 FUA and FUA-RAD restrictions**
5. FUA TEMPORARY INSTRUCTIONS (FTI)	
6. LEAD AMC CONCEPT	
7. ASM (Airspace Management) Scenario	**Monitored-Managed scenarios** **Harmonised ASM scenario identification**
8. AMC/CADF ADDRESSES	
9. TRAINING MATERIAL	
ANNEX 1 FTI TEMPLATE	
ANNEX 2 Appendix D of the 'AMC Coordination Letter of Agreement'	
ANNEX 3 Data submission form for ASM related data	
10. ABBREVIATIONS	

TABLE OF CONTENT

DOCUMENT CONTROL I
APPROVAL TABLE I
EDITION HISTORY II
EDITION CHANGE RECORD III
1 INTRODUCTION 1
1.1 PURPOSE 1
1.2 SCOPE 1
2 PROPOSED AMC WORKING PROCEDURES 3
2.1 WORKING PROCEDURE OF THE AMC 3
2.1.1 AUP PROCEDURE 3
2.1.2 UUP PROCEDURE 4
2.1.2.1 TIMING 4
2.1.2.2 NEXT UUP TIME 5
2.1.2.3 SIMULTANEOUS UUPS 5
2.1.2.4 UUP CONTENT 6
2.1.2.5 ALERT FOR ADDITIONAL ROUTE UNAVAILABILITY OR AIRSPACE ALLOCATION (P3) 9
2.2 COMMON PROCEDURE COVERING LARGE HOLIDAY PERIODS 11
2.3 AUP/UUP WARNINGS 11
2.4 TEMPORARY AIRSPACES RELEVANT FOR FPL VALIDATION 14
2.4.1 COORDINATION PROCESS 14
3 CADF WORKING PROCEDURES 15
3.1 SCOPE OF THE CADF 15
3.2 WORKING PROCEDURE OF CADF 15
3.2.1 MAIN CADF TASKS 15
3.2.2 AUP PROCEDURE 15
3.2.3 UUP PROCEDURE 15
3.2.3.1 CHECKING OF THE UUP CONTENT 15
3.2.3.2 PUBLICATION OF UUPS 16
3.3 TECHNICAL PROBLEMS/CONTINGENCY 16
4 FUA-RELATED CACD DATA 17
4.1 RESTRICTED AIRSPACES (RSA) 17
4.1.1 DATA SOURCES 17
4.1.2 RSA TYPES 17
4.1.3 AUP CATEGORIES 18
4.1.4 FUA PARAMETERS (FLEXIBLE USE, LEVEL 1, LEVEL 2, LEVEL 3) 23
4.1.5 CDR INFO (OFFLOAD, NEARBY, EXCLUDED CDRS, RELATED ROUTES) 24
4.1.6 CDR EXPANSION 25
4.1.7 AVAILABILITY 26
4.1.8 ACTIVATION 26
4.1.9 AIRBLOCKS 27
4.1.10 AMC-RSA RELATIONSHIP 29
4.1.11 FMP-RSA RELATIONSHIP 30
4.2 AIR ROUTES 30
4.2.1 DATA SOURCES 30
4.2.2 CACD AIR ROUTE DATASHEET 30
4.3 FPL BUFFER ZONE (FBZ) 31
4.3.1 DATA SOURCES 31
4.3.2 NAMING CONVENTIONS 31
4.3.3 ACTIVATION 32

4.3.4 ALLOCATION 32
4.4 NO PLANNING ZONE (NPZ) 33
4.5 FUA AND FUA-RAD RESTRICTIONS 36
4.5.1 DATA SOURCES 36
4.5.2 FUA AND FUA-RAD RESTRICTION TYPES 36
4.5.3 IMPLEMENTATION OF FUA RESTRICTIONS IN CACD AND USAGE IN CIAM 38
4.5.4 MULTIPLE AS/RT FOR RESTRICTION DEPENDANT APPLICABILITY 40
4.5.5 RESTRICTION GROUPING 44
5 FUA TEMPORARY INSTRUCTIONS (FTI) 45
5.1 BACKGROUND 45
5.2 BASIC AMC/CADF PROCEDURES 45
5.3 TEMPORARY AMC/CADF PROCEDURES 45
5.4 FTI PROCESS 46
5.5 FORMAT AND SUBSEQUENT TREATMENT 46
5.6 FIELDS OF APPLICATION 46
6 LEAD AMC CONCEPT 47
6.1 SCOPE 47
6.2 PROCEDURE 47
6.3 LEAD AMC ROUTES (RELATED ROUTES) 47
6.4 PROMULGATION AND DISTRIBUTION OF INFORMATION ON CROSS-BORDER CDRS AVAILABILITY 48
6.5 HOURS OF OPERATION OF AMCS – DELEGATION OF LEAD AMC RESPONSIBILITIES 49
6.6 ADDITIONAL INFORMATION 49
6.7 LEAD AMC LIVE UPDATEABLE 49
7 ASM (AIRSPACE MANAGEMENT) SCENARIO 53
8 AMC/CADF ADDRESSEES 59
8.1 SCOPE 59
9 TRAINING MATERIAL 61
ANNEX 1 - FUA TEMPORARY INSTRUCTION (FTI) TEMPLATE 63
ANNEX 2 - APPENDIX D OF THE ‘AMC COORDINATION LETTER OF AGREEMENT’ 65
ANNEX 3 - DATA SUBMISSION FORM FOR ASM RELATED DATA 67
10 ABBREVIATIONS 71

1 Introduction

1.1 Purpose

The purpose of this manual is to provide the Airspace Management Cell (**AMC**) personnel and the EUROCONTROL/NM Centralised Airspace Data Function (**CADF**) personnel with the necessary guidance to perform their daily tasks and to prepare and release daily the consolidated European Airspace Use Plan (EAUP) and European Updated Airspace Use Plan(s) (EUUP(s)).

1.2 Scope

The manual describes the basic principles, timeframes and working procedures. The manual and any updates shall be coordinated and endorsed by ASMSG according to the process agreed at ASMSG/70.

The manual should be considered as an operational attachment to the EUROCONTROL NETWORK OPERATIONS HANDBOOK, but it will be maintained independently.

Caution, in case of conflict or contradiction of data between this manual and the EUROCONTROL ERNIP part 3 – Airspace Management (ASM) Handbook, the ERNIP part 3 is the reference and this manual should be aligned. Deviation could be accepted as FTIs only.

The scope and activities of the NM are detailed in the Network Operations handbook.

INTENTIONALLY BLANK PAGE

2 Proposed AMC Working Procedures

2.1 Working Procedure of the AMC

2.1.1 AUP Procedure

The Airspace Management Cell (**AMC**) should daily[1] promote the AUP as soon as possible and before 13:00 UTC (12:00 UTC summer) from INTENT to DRAFT (this will make the AUP visible to the other AMCs and will enhance the co-ordination whenever required).

Coordination procedures must exist or be established between neighbouring AMCs (lead AMC concept, Cross Border Area concept) if CBO or CBAs are in place.

The draft AUP will also be used to support coordination with the NM as required.

Once the coordination between neighbouring AMCs as well as the NM is finalised, the AMC will promote the AUP before 15:00 UTC (14:00 UTC summer) from DRAFT to READY.

Each AMC must produce a READY AUP for each day, even when no openings or closures have to be done. In the latter case, a NIL AUP shall be made.

This implies that for an AMC not manned during weekend or bank holidays or longer holiday periods, the READY AUPs for those days shall be made at least on the last day before the AMC closes down its operations for the period.

Rolling AUP

Some ANSPs have stable information about planning operations by military well in advance of D-1 and want to publish this information to airspace users earlier. For instance for major scale military exercises, predefined public holidays they will be allowed:

- To publish in advance information of CDRs availability and/or planned allocation of areas;
- AOs and CFSPs to be early advised of CDRs and FBZs/areas information.

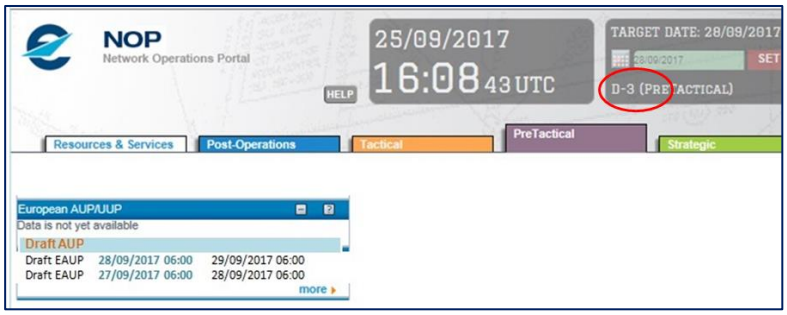
For early coordination between AMCs/AMCs as well as AMCs/NM for improving planning.

Procedure to follow:

- Draft AUP can be created as from D-15 but will only be visible on the NOP from D-6 to D-2 included. It is an optional process for AMCs;
- It is automatically published by the system as soon as at least 1 AMC has created a draft AUP between D-6 to D-2;
- Draft AUP is based on available AIRAC data: either on OPS or PRE-OPS when active;
- It cannot be used for FPL processing (only “Released” EAUP can be) because it is not completely validated;

[1] Whenever AMC staff is not available (e.g. W/E, public holidays, ect.), the management of related AUPs is performed the last AMC working day before the relevant period (e.g. AUPs for Sundays and Mondays are prepared the previous Fridays)

- It is not published via B2B, only on the NOP.



Draft AUP on the NOP

2.1.2 UUP Procedure

The UUP process is not mandatory. Therefore, the following instructions are applicable only to those States using UUPs.

2.1.2.1 Timing

Technically, CIAM allows the publication of a UUP for a validity starting at any time between 06.00 UTC and 06.00 UTC the next day. The 'Next UUP time' is set by CADF (cf. next paragraph).

It is planned to have up to 31 UUPs (4 on D-1 + 27 on D) at fixed times as follows:

Winter Timetable

AUP/UUP	Draft	Ready before	Released before	Valid from	Valid until
AUP	Before D-1 13:00	D-1 15:00	D-1 16:00	D 06:00	D+1 06:00
UUP06/17	After D-1 16:00	D-1 16:50	D-1 17:00	D 06:00	D+1 06:00
UUP06/18	After D-1 17:00	D-1 17:50	D-1 18:00		
UUP06/19	After D-1 18:00	D-1 18:50	D-1 19:00		
UUP06/20	After D-1 19:00	D-1 19:50	D-1 20:00		
UUP07	After D-1 20:00	D 06:50	D 07:00	D 07:00	D+1 06:00
UUP07:30	After D 07:00	D 07:20	D 07:30	D 07:30	D+1 06:00
UUP08	After D 07:30	D 07:50	D 08:00	D 08:00	D+1 06:00
UUP08:30	After D 08:00	D 08:20	D 08:30	D 08:30	D+1 06:00
UUPhh	*After D hh -30'.*	*D hh - 10'*	*D hh:00*	*D hh:00*	*D+1 06:00*
UUPhh:30	After D hh	D hh + 20'	D hh:30	D hh:30	D+1 06:00
UUP20	After D 19:30	D 19:50	D 20:00	D 20:00	D+1 06:00

Summer Timetable

AUP/UUP	Draft	Ready before	Released before	Valid from	Valid until
AUP	Before D-1 12:00	D-1 14:00	D-1 15:00	D 06:00	D+1 06:00
UUP06/16	After D-1 15:00	D-1 15:50	D-1 16:00	D 06:00	D+1 06:00
UUP06/17	After D-1 16:00	D-1 16:50	D-1 17:00		
UUP06/18	After D-1 17:00	D-1 17:50	D-1 18:00		
UUP06/19	After D-1 18:00	D-1 18:50	D-1 19:00		
UUP06	After D-1 19:00	D 05:50	D 06:00		
UUP06:30	After D 06:00	D 06:20	D 06:30	D 06:30	D+1 06:00
UUP07	After D 06:00	D 06:50	D 07:00	D 07:00	D+1 06:00
UUP07:30	After D 07:00	D 07:20	D 07:30	D 07:30	D+1 06:00
UUPhh	*After D hh – 30'*	*D hh - 10'*	*D hh:00*	*D hh:00*	*D+1 06:00*
UUPhh:30	After D hh	D hh + 20'	D hh:30	D hh:30	D+1 06:00
UUP19	After D 18:30	D 18:50	D 19:00	D 19:00	D+1 06:00

2.1.2.2 Next UUP Time

After each publication of the EAUP or EUUP, the start time of the next UUP has to be set manually in CIAM by the CADF. It should be noted that this 'next UUP' target time applies simultaneously to all users.

For this reason, an AMC shall only start the creation of a draft UUP for a given start time after the publication of the previous EUUP, if any. This is reflected in the third column of the above tables.

Example: draft UUP08 (valid from 08:00 UTC) shall not be created before 07:30 UTC, the publication time of the previous EUUP (Release UUP 07.30), if any.

AMCs are only able to create a UUP that will be valid as from the 'next UUP time' set by the CADF. If the CADF has not set a 'next UUP time', the AMCs are not able to create any UUP and will get an error message.

Considering UUP publication is not mandatory, the CADF will not systematically set the 'Next UUP time' for all possible UUP times. Therefore when intending to create an UUP, an AMC should first check the next UUP time in CIAM. If no 'next UUP time' is set, the AMC should contact the CADF and ask them to set the next UUP time as required, according to the tables above.

CIAM accepts consecutive UUPs with the same start time.

2.1.2.3 Simultaneous UUPs

AMCs should have more flexibility in the management of UUP preparation.

The objective is to ensure that NM Systems shall support the simultaneous preparation by AMCs of several UUPs for the same AUP applicability period with different publication times.

Different AMCs can create additional UUPs with a **WEF (With Effect From)** that is different from the **WEF (With Effect From)** of the next UUP.

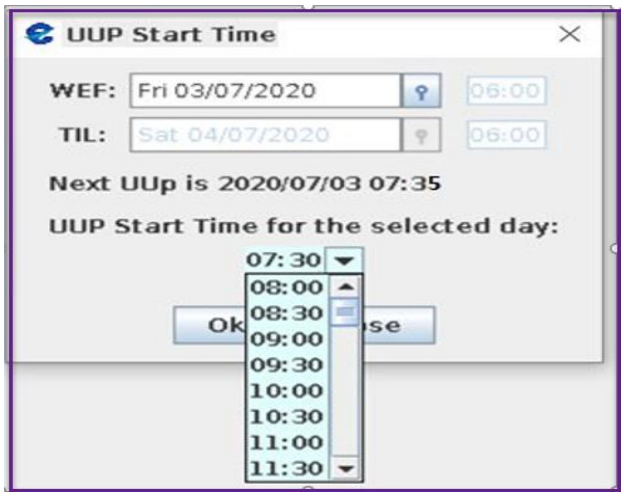
The same AMC shall be able to prepare multiple UUPs in DRAFT or READY with different WEF (With Effect From) at the same time.

When the system has multiple unpublished UUPs for the same AMC within the same AUP period (06:00-06:00) then the UUPs shall have different start times.

The system will be able to process simultaneously UUPs with different validity times. This allows AMCs to prepare UUPs in advance and not within the 30 minutes between two UUPs

How:

- AMC will be able to create a UUP for:
  - Next UUP time as set by CADF
  - Any UUP time after the "Next UUP time", limited to 30 minute steps (09:00, 09:30, 10:00,..)
- New dialogue conceived in the "create UUP" service for the AMC to ask for the UUP Start time. The pop-up window UUP Start Time is displayed. The UUP Start Time displays the Next UUP Time as default time, set by CADF.
- AMC can choose other UUP time, only multiples of 30 minutes allowed by the dropdown list



2.1.2.4 UUP Content

Additional route availability or airspace release

Each UUP can contain the following information:

- Cancellation of RSA allocation;
- Reduction (in time and/or FL) of RSA allocation;
- Additional CDR2 availability;
- Extension (in time and/or FL) of CDR2 availability;
- Cancellation of CDR1/ATS route unavailability;
- Reduction (in time and/or FL) of CDR1/ATS route unavailability; Reduction or cancellation of

restrictions associated to RSAs.

Additional route unavailability or airspace allocation

Additional route unavailability or airspace allocation requested at D-1 for D-OPS can use the UPP 17.00 UTC (summer 16.00 UTC) up to 20.00 UTC (summer 19.00 UTC) every hour.
The day of OPS, each UUP from 07.00 UTC (summer 06.00 UTC) until 20.00 UTC (summer 19.00) can include the following additional information:

- Additional RSA allocation;
- Extension (in time and/or FL) of RSA allocation;
- Cancellation of CDR 2 availability published in previous AUP/UUP;
- Reduction (in time and/or FL) of CDR2 availability published in previous AUP/UUP;
- Additional CDR1/ATS route unavailability;
- Extension (in time and/or FL) of CDR1/ATS route unavailability;
- Additional/more restrictive restrictions.

The additional activations of RSAs or additional/more restrictive restrictions or unavailability of CDRs/ATS routes requested at D-OPS can be part of these UUPs if they comply with the 3-hour lead time (for the changes notified at D-1 by default are more than three hours, with their validity starting only the next day at 06.00 UTC). In case of the request does not respect the three hours (3H) lead time, NM (MILO) shall inform AMC that the request to promulgate the draft UUP is rejected, unless specific contingency situation requires an exception (e.g. correction of previous erroneous publication). Where required, relevant AAs, RSAs users, FMPs concerned and adjacent AMCs should acknowledge the reception of a Draft UUP.

Example

For UUP09 (winter) = UUP08 (summer), this implies that the additional RSA/ restrictions activation/ CDR/ATS routes unavailability must be effective after 12:00 UTC (winter) - 11:00 UTC (summer).

Network Impact Assessment

The NM will assess the impact of the additional RSA/ restrictions activation/ CDR/ATS routes unavailability request at network level (e.g. on-loading sector, sector re- configuration, etc.).

The result of this analysis and potential alternative scenarios (if any) will be sent by the NM to the AMC(s) and FMP(s) concerned for their consideration.

To allow the time necessary in operations for this network impact assessment, UUPs containing additional CDR/ATS Route closures and/or activations of RSAs shall be provided to the NM in draft status as early as possible. In specific, the following procedures are applied:

Based on the Draft UUP, NM (MILO) and FMPs concerned should identify the flights (also those in the “execution phase”, i.e. inside 1 hour prior EOBT) and sectors that would be impacted by the routes closure, and/or restrictions in the airspace availability and look for opportunities reducing the network impact. For any support required for the impact assessment, NM (MILO) will rely on pre-defined scenarios (e.g. strategic restrictions) identified for each area subject to unplanned requests of activation. States, e.g. through AMCs) should notify to NM (MILO) at strategic level which are the

areas for which P3 will be applied; this information will allow NM to prepare the pre-defined scenarios in advance.

Especially, as a part of the local and network assessment on the day of operation:

FMPs concerned, in coordination with AMCs should identify the flights that will be in the execution phase by the time of the new/revised areas activation and/or CDRs unavailability. NM (MILO) will support such task if required

FMPs/ATCs concerned should assess their ability to manage tactically the flights to be in the execution phase if any. Alternatively, in coordination with AMC and NM (MILO), look for optimisation of airspace allocation (e.g. changing the activation time, flight level band, CDR unavailability details, different restrictions etc.) to ensure the number of flight in execution phase to be handled tactically (number of flights to be in the execution phase) is kept at an acceptable level for ATCO(s) concerned;

If, due to inability to optimise the airspace allocation and/or restrictions activation, the number of the flights in the execution phase (and/or added complexity) remains unacceptable for ATCO(s), FMPs concerned, in coordination with NM (TACT), should develop and introduce ATFCM measures ensuring ATCO(s) workload allows tactical management for those flights;

In case if, in spite all efforts, there is no possibility to put in place any, or combination of, effective ATFCM measures to optimise airspace allocation and/or to optimise restrictions activation, allowing feasible tactical management of the flights in execution phase by ATCO, such airspace request should not be accommodated by AMCs concerned.

The results of the network analysis and potential alternative scenarios required, should be made available by NM (MILO, TACT) to the AMCs and FMPs concerned (i.e. of upstream and downstream ATS units to be involved in the potential re-routeing as a result of unplanned area activation and/or new/more constraining restrictions) for their considerations.

AMCs should receive the Scenario proposed by NM (MILO) and FMPs concerned as early as possible before the UUP deadline and conduct final coordination with Airspace Users, if required.

AMCs in agreement with the concerned FMPs should take its final airspace allocation decision, and, if required, compose the UUP accordingly (Ready status).

The new airspace structure (additional activation of areas and CDRs/ATS routes closure) and/or new/more constraining restrictions should be implemented in the NM CACD database according to UUP information for ensuring FPL consistency.

The CDRs/ATS routes unavailability and/or areas/new/more restrictive restrictions activations will be notified via EAUP/EUUP through:

- the NOP portal; and
- eAMI

Dissemination of information via eAMI should be done through the posting of CDR/ATS routes airspace status and/or new/more constraining restrictions updates onto FTP server in the same way as is being done by NM for e-RAD promulgation. Such a process would allow AO stakeholders using B2B service to upload the updates.

It remains a State responsibility to decide whether an AIS notification (e.g. NOTAM) is required in addition to publish the new CDRs/ATS routes unavailability.

New FPLs affected by the updated airspace status will be rejected. If FPLs are already available, FLS messages should be sent by NM to flights concerned:

Should the flight be in the Planning Phase, interested AOs should re-file FPLs accordingly;

Should the flight be in the Execution Phase, it may continue as planned. Any required re-routeing will be provided by the ATCO to the pilot.

Note 1: The final decision to apply procedure 3 remains a national responsibility; therefore, in case of impossibility to perform a network assessment, the involved AMCs shall ensure adequate coordination with local FMPs as well as with adjacent AMCs whenever required.

Note 2: Flight in the planning phase means a flight in any stage of preparation 1 hour and more before EOBT.

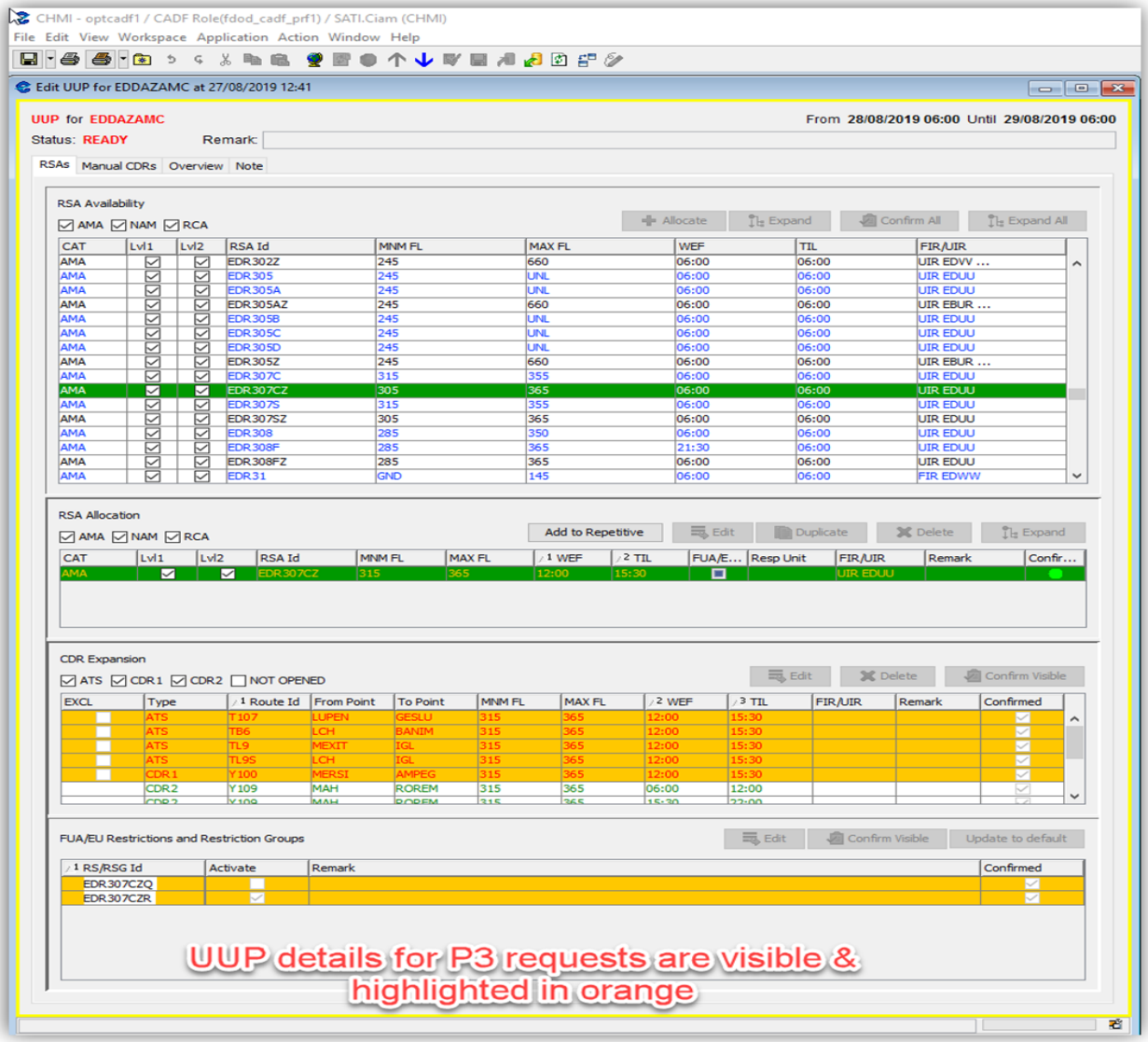
Note 3: Flight in execution phase means a flight as from 1 hour before EOBT onwards (including the airborne stage).

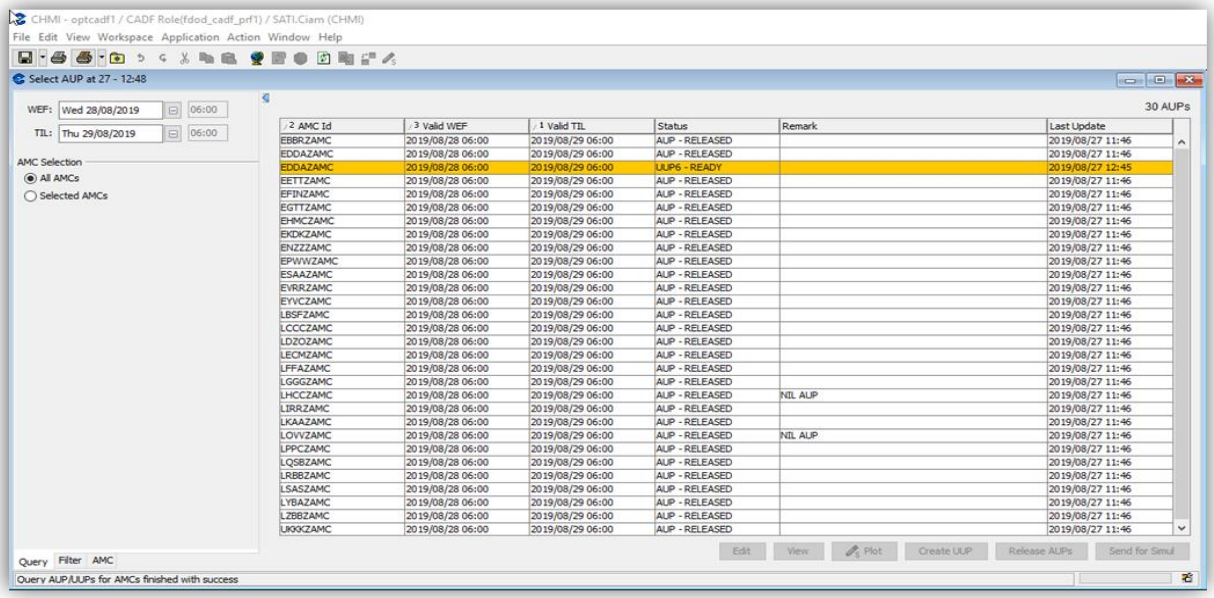
2.1.2.5 Alert for Additional route unavailability or airspace allocation (P3)

In order to facilitate the application of P3 and to avoid mistakes an automatic detection is introduced of P3 requests in a draft UUP to:

- Automatically highlight UUPs containing a P3 request in CIAM
- Automatically highlight the actual P3 requests inside the UUP
- Provide the P3 information via B2B

When the UUP is saved in status DRAFT or READY, CIAM compares the UUP with previous AUP/UUP release plan and adds a “P3” flag to the UUP and to every RSA allocation, CDR update and FUA/EU restriction by the means of a specific colour:


CHMI - optcadf1 / CADF Role(fdod_cadf_prf1) / SATI.Ciam (CHMI)
File Edit View Workspace Application Action Window Help
Edit UUP for EDDAZAMC at 27/08/2019 12:41
UUP for EDDAZAMC
From 28/08/2019 06:00 Until 29/08/2019 06:00
Status: READY
Remark:
RSAs Manual CDRs Overview Note
RSA Availability
AMA NAM RCA
Allocate Expand Confirm All Expand All
RSA Allocation
Add to Repetitive Edit Duplicate Delete Expand
CDR Expansion
ATS CDR1 CDR2 NOT OPENED
Edit Delete Confirm Visible
FUA/EU Restrictions and Restriction Groups
Edit Confirm Visible Update to default
UUP details for P3 requests are visible & highlighted in orange


CHMI - optcadf1 / CADF Role(fdod_cadf_prf1) / SATI.Ciam (CHMI)
File Edit View Workspace Application Action Window Help
Select AUP at 27 - 12:48
WEF: Wed 28/08/2019 06:00
TIL: Thu 29/08/2019 06:00
AMC Selection
All AMCs
Selected AMCs
30 AUPs
Query Filter AMC
Edit View Plot Create UUP Release AUPs Send for Simul
Query AUP/UUPs for AMCs finished with success

2.2 Common Procedure Covering Large Holiday Periods

When military operations are foreseen to be significantly reduced, e.g. during a long-term holiday period, some States allow the re-classification of some CDRs 2 as CDRs 1. Adequate notification to the users is required, possibly according AIRAC cycles or via NOTAM to be issued at least one week in advance. The affected routes and times should be coordinated through the Lead AMC for cross-border CDRs 2 concerned.

Once those CDRs have CDR 1 status and, during all the holiday periods defined in the NOTAM, CDR 1 procedures will apply and in particular, those concerning the closure of CDR 1 (see EUROCONTROL ERNIP Part 3 ASM Handbook paragraphs 4.6.1, 4.6.2, 4.6.3 & 4.6.4).

In support of this re-classification procedure, a list of days when military operations are likely to be reduced allowing the temporary conversion of CDR 2 into CDR 1, should be established per country in order to inform the NM/CADF in advance of NOTAM distribution (e.g. National public holidays, bridge days, Christmas period and Easter period).

An example of a common NOTAM, covering a Large Holiday Period can be:

Filing time: 05/12/05 12:00
Origin time: 051205
Destination:
AFTN Originator:
Message text:
(A____/05 NOTAMN
Q)
A)???? B)0512211500 C)0501020600
E) THE CDR2 ROUTES LISTED HEREAFTER WILL BE PERMANENTLY AVAILABLE FOR FLIGHT PLANNING DURING THE ABOVE MENTIONED PERIOD.)

UG109	KOK/DIK/KHR	195/460
UJ158	BAM/LNO	250/460

In specific circumstances, also CDR3 could be re-classified as CDR1; in these cases notification to the users should be provided according to AIRAC cycles.

2.3 AUP/UUP warnings

There is no NOTAM closure corresponding to the AUP/UUP closure (Route ID: Route portion)

This warning indicates that NO NOTAM closure was manually input in CACD. NOTAM could have been overlooked by CADF staff or no NOTAM was published. The CDR1/ATS route closure will be applied to the NM systems according to the AUP/UUP data.

Actions

CACD: No action

AMC: Depending on internal ANSP/State agreement, NOTAM publication or no NOTAM publication, the AMC is to coordinate with responsible services for the publication of a NOTAM.

The AMC is to decide the way of closing routes they prefer: NOTAM or AUP closures or combination of both.

AUP/UUP closure (Route ID: Route portion) is only partially covered by NOTAM closure(s)

This warning indicates that a NOTAM was implemented by CADF staff, but the closing time via AUP/UUP of the mentioned route(s) in the NOTAM is longer then published on the NOTAM. The CDR1/ATS route closure will be applied to the NM systems according to the AUP/UUP data.

Actions

CACD: No action

AMC: Depending on internal ANSP/State agreement, NOTAM update publication, the AMC is to coordinate with responsible services for the publication of a NOTAM or UUP to adapt according NOTAM publication.

----------| AUP/UUP

01.00 19.00

----------| NOTAM

01.00 18.00

NOTAM closure (Route ID: Route portion)"is only partially covered by AUP/UUP closure(s)

This warning indicates that a NOTAM was implemented by CADF staff, but the closing time via AUP/UUP of the mentioned routes in the NOTAM is shorter then published on the NOTAM. The CDR1/ATS route closure will be applied to the NM systems according to the AUP/UUP data.

Actions

CACD: No action

AMC: Depending on internal ANSP/State agreement, NOTAM update publication, the AMC is to coordinate with responsible services for the publication of a NOTAM or UUP to adapt according NOTAM publication.

|---------- AUP/UUP

01.00 17.00

|---------- NOTAM

01.00 18.00

A combination of warning 2.2 and 2.3 will indicate a warning as well. A NOTAM was implemented by CADF staff. The CDR1/ATS route closure will be applied to the NM systems according to the AUP/UUP data.

Actions

CACD: No action

AMC: Depending on internal ANSP/State agreement, NOTAM update publication, the AMC is to coordinate with responsible services for the publication of a NOTAM or UUP to adapt according NOTAM publication.

|----------| AUP/UUP

04.00 19.00

|----------| NOTAM

01.00 18.00

CDR2 (Route ID): Route portion open by AUP or a previous UUP is being re-closed for at least part of the FL range and applicability period.

Actions

CACD: No action

AMC: Depending on internal ANSP/State agreement, NOTAM publication, the AMC is to coordinate with responsible services for the publication of a NOTAM.

RSA allocation (RSA ID) is less than 3 hours after planned UUP publication

CDR1/ATS route closure (Route ID: Route portion) is less than 3 hours after planned UUP publication

CDR2 re-closure (Route ID: Route portion) is less than 3 hours after planned UUP publication

Warning: the above 3 messages indicate that the agreed 3 hour lead time for the procedure 3 application is not respected in an UUP.

Actions

CACD: CADF/MILO shall inform the AMC of the discrepancy and the need to reject the request unless safety justifications are provided

CADF/MILO shall inform the AMC of the discrepancy and the need to reject the request unless safety justifications are provided

AMC: modify the request or report to CADF/MILO staff reason (typing error, safety issue, etc.)

Remark: CADF staff still monitors CDR1/ATS route closures and implement the route closures manually in the CACD, based on the published NOTAMs and before AUP/UUP validation in CIAM.

2.4 Temporary airspaces relevant for FPL validation

- Manageable or Restricted Areas represent a part of the airspace where General Air Traffic (GAT) can be restricted. In practice; it corresponds in most cases with airspace where military operations may take place.
- Each Manageable Area is managed in time by one and only one Airspace Management Cell (AMC). The selected lead AMC is responsible for the coordination and final publication of the restrictions of the Area
- CACD data only includes Restricted Areas (RSAs) after coordination with /request from the concerned AMC through the National Environment Coordinator (NEC).
- The coordination with the NEC depends on the internal agreement inside ANSP/STATE concerning the request of implementing RSAs in CACD. This coordination is needed to decide precisely which of the Restricted Areas published in AIPs are required in CACD, and to define CIAM-specific parameters for which the values are not published.
- It should also be noted that once Restricted Areas are defined in CACD operations database, an AUP is required daily for the concerned AMC.

2.4.1 Coordination process

States' requests for the modification of route and/or area availability in the CACD should be supported by the publication of a NOTAM or AIP SUP and/or AUP/UUP. Telephone, email and fax should be used as the sole means of communication only in case of contingency procedures due to technical constraints or for specific requests, when a NOTAM or UUP cannot fulfil operational requirements.

In case a State requires the NMOC to implement a temporary area (e.g. for military exercises) in the CACD which shall be relevant for FPL validation, the following coordination procedure and deadlines shall be applied:

Provide the NM the temporary area according to the schedule defined in ERNIP Part 3 Annex 13.

This deadline does not apply to temporary areas established on short notice, e.g. for security reasons, political events or in case of (natural) disasters. However, it is recommended to follow ICAO requirement to issue a NOTAM at least seven (7) days before the events, if practicable..

If AIRAC related-data cannot be delivered before the above-mentioned period, the NM is to propose other solutions to the AMC, if any, for FPL checking during the event. In both cases, an AIS publication (NOTAM/AIP SUPP) is required to support the request.

The AUP/UUP procedure should be used for those RSAs classified as manageable/Non manageable; NOTAM / AIP SUP publication should provide information for those RSAs classified as NAM to set the default conditions.

If only NOTAM publication is used and ANSPs/States requires FPL validation on announced activities via NOTAM (NO introduction of RSAs in CACD), an FTI is also required. The reason for the FTI is that CADF staff does not monitor NOTAMs on area activities.

3 CADF working procedures

3.1 Scope of the CADF

The Centralised Airspace Data Function (CADF) within the NM is charged with the collection and compilation of the Airspace Use Plans and Updated Airspace Use plans (AUPs/UUPs) sent by the European AMCs and publication on the NOP Portal of the consolidated European AUP/UUP (EAUP/EUUP).

The CADF position is located in the Network Manager Operations Centre (NMOC) and manned daily from 06:00 UTC (05:00 UTC summer) up to 21:00 UTC (20:00 UTC summer).

3.2 Working Procedure of CADF

3.2.1 Main CADF tasks

On request, the CADF provides assistance to AMCs encountering difficulties in the composition of their AUP/UUP in CIAM or other ASM support systems.

The CADF monitors NOTAMs related to Route availability and inputs ATS Route/CDR closures in CACD, except for those of ANSPs mentioned in FTI with subject “AMC Route availability Operating Changes / NOTAM publication”.

The CADF sets the ‘Next UUP time’ on request of AMCs, as explained in 2.1.2. above.

The CADF coordinates with the NM’s Pre-tactical and MILO for the Network Impact Assessment of specific UUPs containing additional route unavailability or airspace activation (cf. 2.1.2 above).

The CADF releases AUPs and UUPs as detailed in 3.2.2 and 3.2.3 below.

3.2.2 AUP Procedure

At the time agreed in the procedure (cf. 2.1.1), CADF validates the Ready AUPs. In this process, the final AUPs produced by AMCs (Ready AUPs) are re-validated against the current CACD data. In case of discrepancy, the CADF coordinates with the concerned AMC(s) for correction.

The release of the AUPs triggers the update of NM operational systems and makes the information available as an EAUP on the Network Operations Portal, as well as through eAMI via B2B.

3.2.3 UUP Procedure

3.2.3.1 Checking of the UUP content

AMCs are responsible for the compliance of the UUP with the constraints described in 2.1.2. However, as a service to external clients, CADF staff will verify the content of the UUP against these constraints and advise AMCs of discrepancies.

The CADF is not in a position to refuse the UUP, but if an UUP with discrepancies is implemented on request of an AMC, the AD Domain manager will be informed for follow-up with the concerned State.

3.2.3.2 Publication of UUPs

At the time agreed in the procedure (cf. 2.1.2 above), the CADF releases the available Ready UUPs, if any. This triggers the update of NM operational systems and makes the information available as a EUUP on the Network Operations Portal, as well as through eAMI via B2B.

If, at the time of publication, there is still an UUP in draft status, the CADF contacts the concerned AMC. Either this UUP can be set to Ready status for immediate publication, or it has to be deleted in order to prevent blocking the publication of UUPs of other states.

If there is no UUP, no publication is required.

3.3 Technical Problems/Contingency

NM agreements concerning contingency procedures should be signed between the NM and national authorities; Annex 11 of the ERNIP Part 3 - ASM Handbook will be used as a referent template. A FUA Temporary Instruction (FTI) has been published to provide AMC/CADF staff guidance in case of contingency procedures for AMC's that didn't sign yet the agreement for contingency procedures. (see FTI/21-001 before NM25.0 - FTI/21-002 **as from** NM25.0)

4 FUA-related CACD data

The following paragraphs provide information on the CIAM specific parameters used to process the data gathered in the CACD. The terminology used is related to the specific tools above mentioned.

4.1 Restricted Airspaces (RSA)

4.1.1 Data Sources

- Restricted Airspace (RSA) is the generic terms to define restricted/reserved areas uploaded in CACD and managed by NM system. It represents a part of the airspace where General Air Traffic (GAT) can be restricted. In practice, it corresponds in most cases with airspace where military operations may take place.
- CACD data only includes RSAs after coordination with /request from the concerned AMC through the National Environment Coordinator (NEC).
- The coordination with the NEC depends on the internal agreement inside ANSP/STATE concerning the request of implementing RSAs in CACD. This coordination is needed to decide precisely which of the Restricted Areas published in AIPs are required in CACD, and to define CIAM-specific parameters for which the values are not published.
- It should also be noted that once Restricted Areas are defined in CACD operations database, an AUP is required daily for the concerned AMC.

4.1.2 RSA Types

RSAs are divided into two types: Elementary RSA (ERSA) and Composed RSAs (CRSA).

Both ERSA and CRSAs are further divided into 10 RSA types.

These types correspond to the classification of these airspaces according to the official publications:

- Danger area D
- Restricted area R
- Prohibited area P
- Temporary Reserved Area TRA
- Temporary Segregated Area TSA
- Reduced Coordination Area RCA
- Military Reserved Area MRA
- Military Training Area MTA
- Cross-Border Area CBA
- Flight Plan Buffer Zone FBZ
- No Flight Plan Zone NPZ

Specific constraints for Composed RSAs (CRSAs):

- A composed RSA (CRSA) must have the same RSA Type as one of its composing Elementary RSAs (ERSA);
- A composed RSA of RSA type CBA must have the following principles as an Identifier in order to ensure harmonised identification of CBA's across Europe:
  - A group of two letters (EU); followed by
  - C" (EAD DHO-5, rule 6 for CBA); followed by
  - A group of up to 6 characters (preferably digits) unduplicated within ECAC.

In order to ensure the uniqueness of the designator, a centralised management of CBA identification in Europe has been agreed, with tasking ASMSG and its Secretariat to manage the process in close coordination with EAD.

The list of all implemented CBAs in NM system will be reported at each ASMSG meeting via the CADF report.

Over the high seas, the harmonised CBA identification is not applicable. When D areas are established by different States on both sides of the FIR/UIR boundary and may be used jointly in accordance with bilateral agreements, their identification shall respect the provisions of ICAO Annex 11 section 2.31, and of the ASM Handbook 6.1.5.2 when applicable."

Request for new CBAs must be send to the NM AD Supervisor, ASMSG secretariat.

The CBA ID's will be communicated ASAP back to the requester.

Following form "Data submission form for ASM data" should be used to request the implementation of ASM related data in NM systems.

The form is published on the NOP:

"Network operations HANDBOOK / Other operational handbooks & CACD forms"

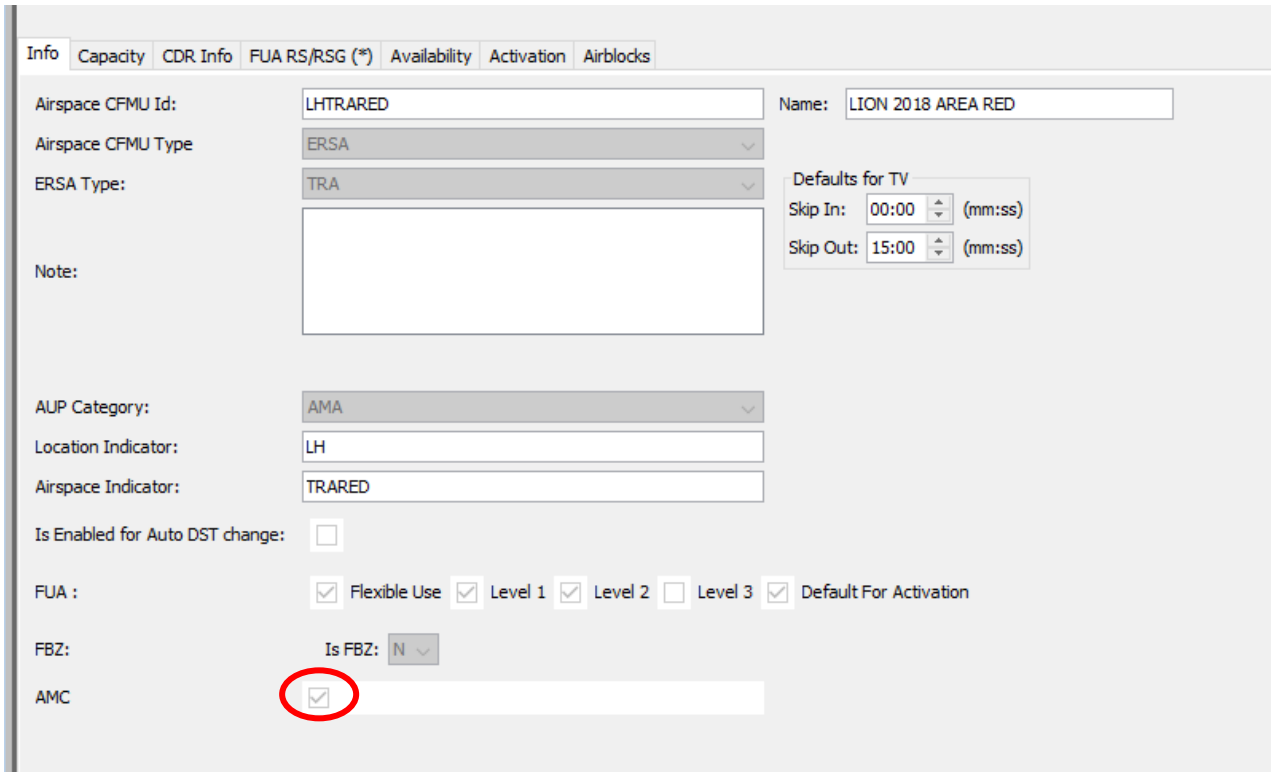
4.1.3 AUP Categories

For all the areas inserted in the CACD, there are 4 possible values of Airspace Use Plan (AUP) category, which are derived from the FUA parameters (cf. 4.1.4):

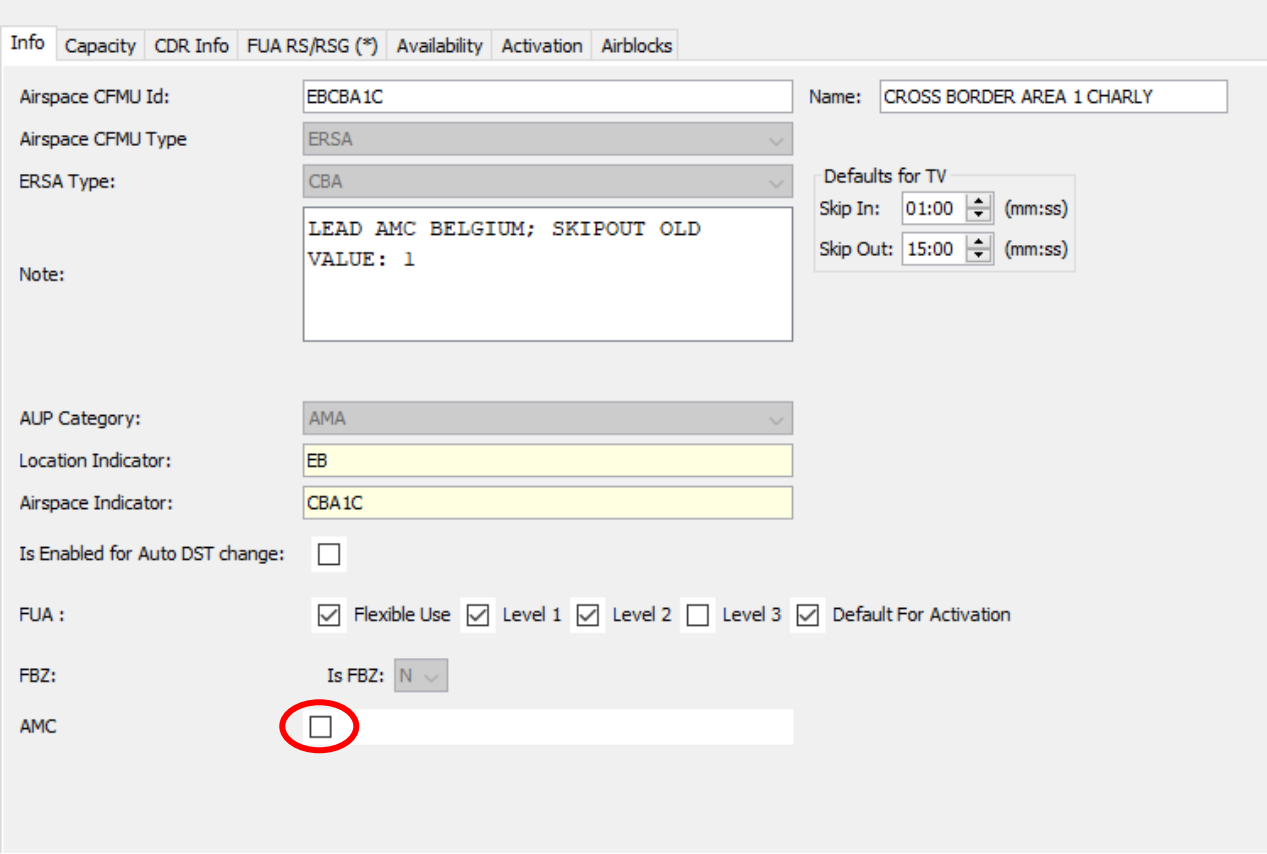
- AMA (AMC manageable): areas which can be allocated in a flexible way under the responsibility of only one AMC at each time. These RSAs can be of two categories:
  - AMA with AMC Flag on (negotiable): areas which can be allocated in a flexible way after due coordination /negotiation between AMCs and relevant Approved Agencies. NM can provide advice on possible adaptation of the areas if relevant for the network.
  - AMA with AMC Flag off (not negotiable): areas which can be allocated in a flexible way but not subject to coordination/negotiation between AMCs and Approved Agencies. NM is not entitled to provide advices.

  These categories are not applicable to those RSA types that in the table described in paragraph 4.1.4 with only "N" for FUA level 2 parameter, namely Prohibited areas (P) that can only be NAM.

This differentiation is highlighted in the following ENV screenshots.



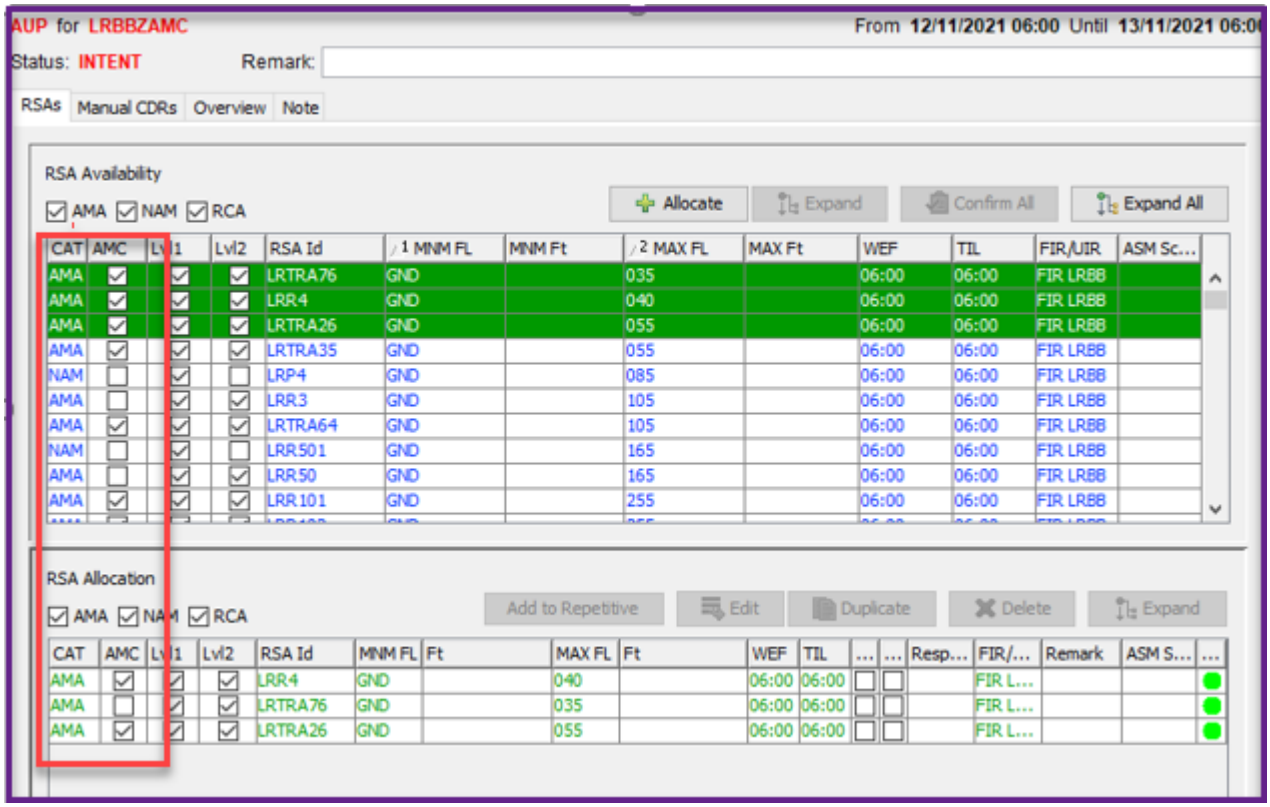
AMA with AMC capability of negotiation



AMA with NO AMC capability of negotiation

Both are AMA and SHALL be allocated daily via AUP, otherwise they will NOT be activated in the NM system (FPLs will be accepted).

The following screenshot demonstrates how the two different AMAs are presented in CIAM with reference to the "AMC negotiable" information.



This information (AMC negotiable or not) is retrieved automatically as default value from ENV data. However, AMC's can still tick/un-tick the AMC flag when they daily allocate an area. Whilst it is unlikely that non-negotiable areas will become negotiable, it is feasible that normally negotiable areas would be temporary non-negotiable. This dynamic information will facilitate the coordination between AMCs/NM to focus only on those areas with the opportunity of negotiation only.

- NAM (Non AMC manageable): areas which are allocated to interested airspace users without prior coordination/negotiation with the AMC.
- RCA (Reduced Coordination Airspace): airspaces in which civil air traffic control can allow flights to deviate from the published route structure (using a DCT) with limited or no prior coordination and under the responsibility of only one AMC.
- Blank: airspaces for which a standard coordination agreement exists and which are never mentioned in the AUP. These airspaces shall be displayable in the CACD, but shall not be considered for AUP processing.

The AUP category (AMA, NAM, RCA, None) is derived from the FUA parameters (cf. 4.1.4), according to the following rules:

- For any RSA type except RCA:
  - If FUA Level 1 and FUA Level 2: AUP category = AMA (with AMC Flag on/off)
  - If only FUA Level 1: AUP category = NAM
- For an RSA of type RCA: AUP category = RCA
- Any other combination: AUP category = None

Although the AUP category is effectively replaced by the FUA parameters, it is kept as an RSA parameter until further notice because it is still used in CIAM mechanisms (CDR expansion etc.) and in CIAM windows (e.g. as a selection criterion).

It should be noted in particular that a NAM (Non-AMC Manageable Area), which is normally not explicitly allocated in an AUP/UUP, is still considered by CIAM as implicitly allocated during its period of availability. This may have an impact on the CDR expansion proposed by CIAM for such an RSA, as well as on the activation data automatically propagated from the AUP/UUP to the RSA datasheet. AMCs can modify some parameters according to the following table.

	Action	**AMA/AMC Negotiable**	**AMA/NOT AMC negotiable**	**NAM**	**NAM** activated by NOTAM[2]
1.	Area activation	AMC	AMC	by default	CADF Staff to insert availability time (on request from the AMC) or times delivered by AUP
2.	Area de-activation	AMC. (Do nothing if the RSA already not active)	AMC. (Do nothing if the RSA already not active)	CADF Staff to insert availability time as “empty” (on request from the AMC)	Do nothing if time availability is empty. If previously time availability inserted, CADF Staff to insert availability time as “empty” (on request from the AMC)
3.	FUA restriction from ON to OFF	AMC	AMC	AMC	AMC (once the area is active, see point 1.)
4.	Reduce availability time	AMC	AMC	AMC	AMC (once the area is active, see point 1.)
5.	Extend availability time	AMC subject to and in accordance with NOTAM (for temporary extension) CADF Staff according to AIRAC cycle (for permanent	AMC subject to and in accordance with NOTAM (for temporary extension) CADF Staff according to AIRAC cycle (for permanent changes or temporary	AMC subject to and in accordance with NOTAM (for temporary extension) CADF Staff according to AIRAC cycle (for permanent	CADF Staff (on request from the AMC) AMC subject to and in accordance with NOTAM (once the area is active, see point 1. For

[2] Possibility to modify the NAM’s which are likely to be activated differently from their default as AMA Non AMC Negotiable

		changes or temporary changes notified via AIP Supplement)	changes notified via AIP Supplement)	changes or temporary changes notified via AIP Supplement)	temporary extension) CADF Staff according to AIRAC cycle (for permanent changes)
6.	Reduce vertical limits	AMC	AMC	AMC	AMC (once the area is active, see point 1.)
7.	Extend vertical limits	AMC subject to and in accordance with NOTAM (for temporary extension) CADF Staff according to AIRAC cycle (for permanent changes or temporary changes notified via AIP Supplement)	AMC subject to and in accordance with NOTAM (for temporary extension) CADF Staff according to AIRAC cycle (for permanent changes or temporary changes notified via AIP Supplement)	AMC subject to and in accordance with NOTAM (for temporary extension) CADF Staff according to AIRAC cycle (for permanent changes or temporary changes notified via AIP Supplement)	AMC subject to and in accordance with NOTAM (once the area is active, see point 1. For temporary extension) CADF Staff according to AIRAC cycle (for permanent changes)
8.	Reduce horizontal limits	AD SPVR (AIRAC cycle)	AD SPVR (AIRAC cycle)	AD SPVR (AIRAC cycle)	AD SPVR (AIRAC cycle)
9.	Extend horizontal limits	AD SPVR (AIRAC cycle)	AD SPVR (AIRAC cycle)	AD SPVR (AIRAC cycle)	AD SPVR (AIRAC cycle)

Comparison between AMA and NAM in terms of areas management in NM Systems

As described in the table before, the processing of AMAs, AMC negotiable or NOT, is the same. The information is only to facilitate the CDM process.

Note 1: NOTAM publication and coordination via e-mail (ref nbr NOTAM) required with CADF position before updates will be done in CACD concerning NAM areas, see item 1 / 2 / 4 / 5 and 6 of table above.

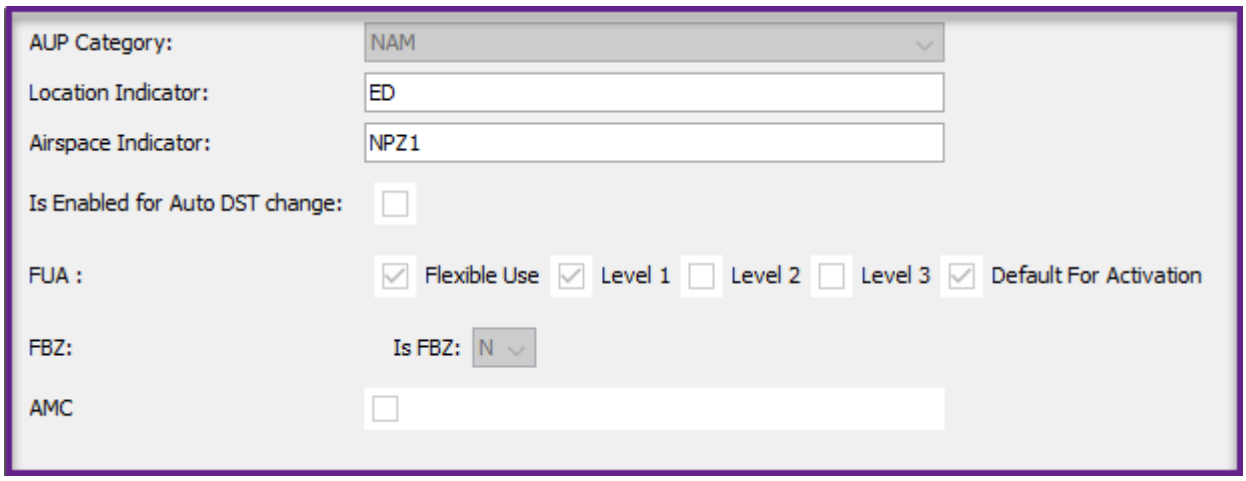
Note 2: Publication in AIP to be updated and e-mail (using Data_submission form for ASM related data) to request modification in CACD (Annex 3).

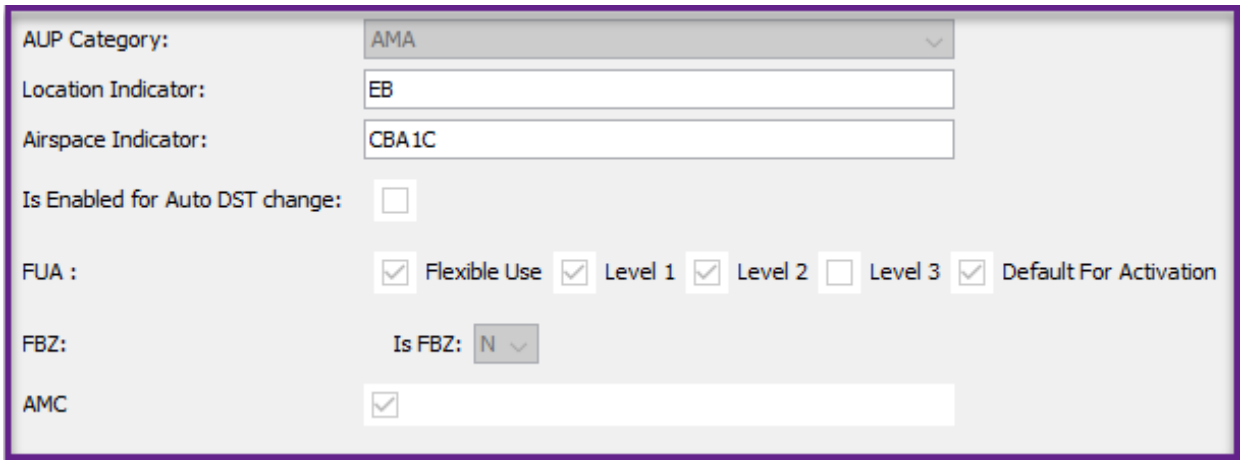
Note 3: CADF contacts: nm.ad.cadf@eurocontrol.int

Phone number: +32 27451939

(Back up NM AD Supervisor: +32 27299848)

4.1.4 FUA Parameters (Flexible Use, Level 1, Level 2, Level 3)





The FUA parameters remain the same for AMAs with or without the AMC negotiable box ticked.

These parameters indicate whether the RSA is managed according to FUA principles, and if so, in which FUA phases (or ASM levels) a change of the allocation is allowed. They are visible in the RSA list of CIAM, but can only be updated in the RSA definition itself.

- Flexible Use: the airspace is not designated as either military or civil airspace but should be considered as one continuum and used flexibly on a day-to-day basis. Consequently, any necessary airspace segregation should be only of a temporary nature. If Flexible Use is selected, then at least one level must be selected as well.
- Level 1: the airspace is manageable at ASM level 1 (strategic level). The act of defining and reviewing as required the national airspace policy taking into account national and international airspace requirements. The activation of an RSA of Level 1 is determined by its availability.
- Level 2: the airspace is manageable at ASM level 2 (pre-tactical level). The act of conducting operational management within the framework of pre-determined existing ATM structure and

procedures defined in ASM Level 1 and of reaching specific agreement between civil and military authorities involved. An RSA of Level 2 is activated by its allocation in the AUP/UUP.

- Level 3: the airspace is manageable at ASM level 3 (tactical level), the act on the day of operations of activating, de-activating or real-time reallocating airspace allocated in Level 2 and of solving specific airspace problems and/or individual OAT/GAT traffic situations in real-time between civil and military units and/or controllers, as appropriate. An RSA of Level 3 can be activated by real time activations, which are presently not known by the NM.

The allowed combinations of RSA types and FUA parameters are given in the table below:

FUA parameters **RSA type**	**Flexible Use**	**Level 1**	**Level 2**	**Level 3**
D	Y/N	Y/N	Y/N	Y/N
R	Y/N	Y/N	Y/N	Y/N
P	Y/N	Y/N	N	N
TRA	Y	Y	Y	Y/N
TSA	Y	Y	Y	Y/N
RCA	Y	Y	N	Y/N
MRA	Y	Y/N	Y/N	Y/N
MTA	Y	Y/N	Y/N	Y/N
CBA	Y	Y	Y	Y/N
FBZ	Y	Y	Y	Y/N
NPZ	Y	Y	Y	Y/N

Table legend: *Y = FUA parameter is mandatory for this RSA type*
N = FUA parameter is not allowed for this RSA type
Y/N = FUA parameter is optional for this RSA type

4.1.5 CDR Info (Offload, Nearby, Excluded CDRs, Related routes)

There are 3 possibilities for the CDR Info (see below).

This data is provided by the lead AMC, normally through the National Environment Coordinator (NEC).

The purpose of this data is to fine-tune the proposals of CDR expansion made by CIAM when the concerned RSA is allocated or expanded in the AUP/UUP.

The CDR Info data is live-updatable.

Note that routes crossing the RSA are not defined as explicit RSA data because these routes are derived automatically by CIAM.

- Offload CDRs

Offload CDRs are CDR2 segments (Route, From PT, To PT, Lower FL, Upper FL) that CIAM will propose to open in the AUP/UUP when the RSA is allocated or expanded.

- Nearby CDRs

Nearby CDRs are CDR1 or ATS route segments (Route, From PT, To PT, Lower FL, Upper FL) that CIAM will propose to close in the AUP/UUP when the RSA is allocated, in the same way as it proposes to close the crossing segments.

Nearby CDRs are generally route segments preceding or following a crossing segment that it would not make sense to leave open when the crossing segment is closed, or route segments very close to the RSA but not effectively crossing it (in particular due to the fact that CIAM only considers the ATS route centreline, as if the ATS route was 0 NM wide…).

- Excluded CDRs

Excluded CDRs are CDR2, CDR1 or ATS route segments (Route, From PT, To PT) physically crossing the RSA but that CIAM will consider as not crossing the RSA. As a consequence, CIAM will not propose to close these CDRs in the AUP/UUP when the RSA is allocated or expanded.

Excluded CDRs are generally ATS route segments crossing the RSA but managed tactically by the AMC, and which do not require a closure by NOTAM.

By default CIAM would propose these crossing segments for closure in the AUP/UUP when the RSA is allocated. To avoid that the AMC has to systematically delete these proposed closures from the AUP/UUP, it is possible to define the concerned route segments as Excluded CDRs in the relevant RSA(s).

Note that Excluded CDRs do not include a FL band, which means that the full vertical limits of the route overlapping with the concerned RSA are concerned.

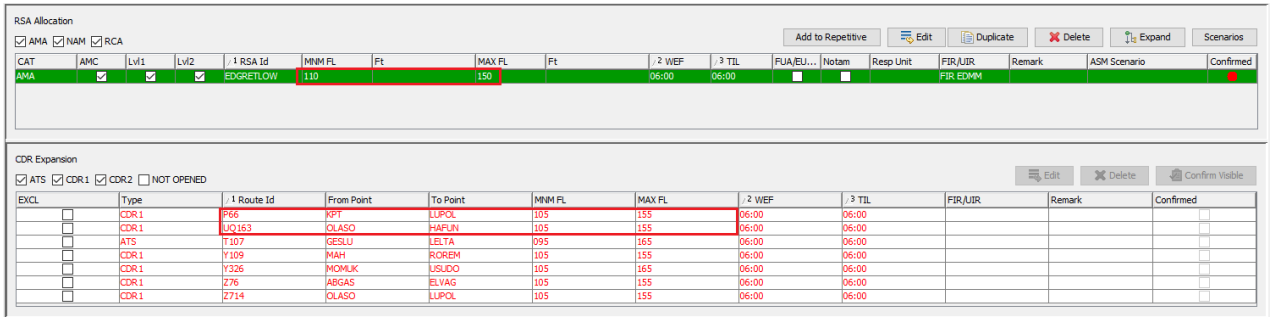
An Excluded CDR can still be entered in the 'Manual CDRs' tab of the AUP/UUP if required.

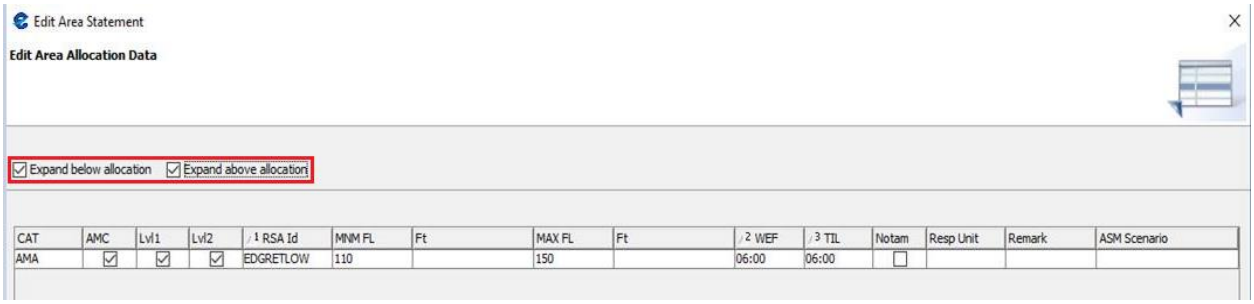
Related Routes: See 6.3 - Lead AMC.

4.1.6 CDR Expansion

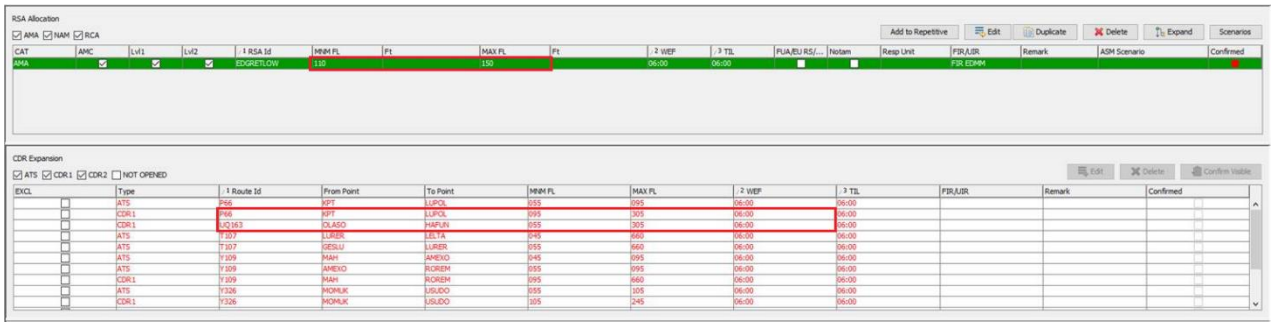
Considers RELATED/CROSSING/OFFLOAD routes vertical limits.

The CDR expansion should trigger CROSSING or NEARBY or OFFLOAD routes as they are described, and not limit the update to the vertical limits of the allocated RSA. This can be done during the allocation of the area:





- Expand above allocation : if checked, indicates that the CDR expansion must go up to the upper limit of the CDR definition, even if this is outside the flRange of the RsaAllocation
- Expand below allocation : if checked, indicates that the CDR expansion must go down to the lower limit of the CDR definition, even if this is outside the flRange of the RsaAllocation



4.1.7 Availability

The availability corresponds to the periods of time when an RSA can be allocated. It is normally published in the national AIP as the period during which the RSA may be active. This data must be cross-checked by the AMC and/or the National ENV Coordinator.

The availability of an Elementary RSA (ERSA) is live updatable. The availability of a Composed RSA (CRSA) is derived from the availability of its composing Elementary RSAs (ERSAs), as the intersection of their availability periods. To retrieve this availability for a CRSA it is necessary to click on the 'Get availability' button.

It should be noted that RSAs with AUP category NAM (Non-AMC Manageable = Level 1 only) are generally not allocated explicitly in the AUP/UUP. In this case, the RSA is considered as implicitly allocated during its period of availability; in other words the RSA availability is the default allocation for a NAM unless an AMC published different values in its AUP (time/vertical reduction of the default values or time/vertical extension due to NOTAM).

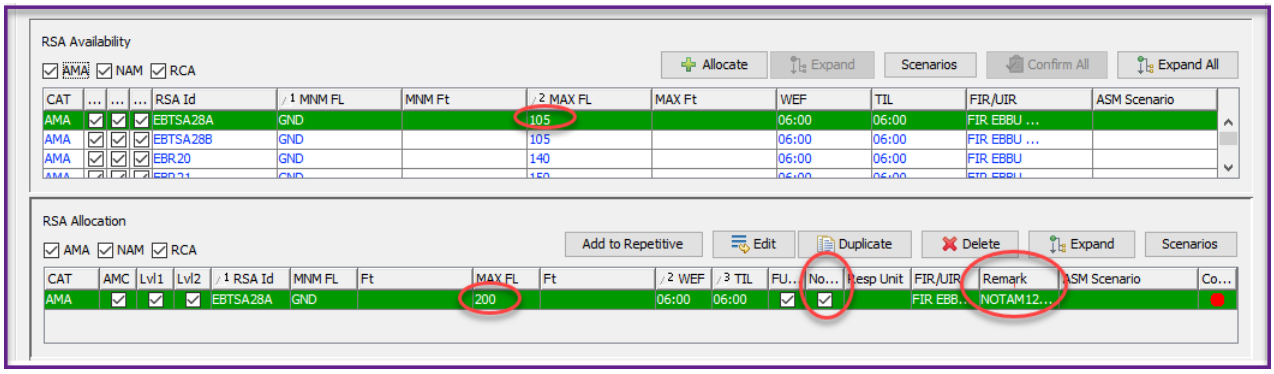
4.1.8 Activation

The RSA activation includes a FL band (Lower/Upper FL), a start date and time, an end date and time, an associated restriction, if established (different from dependent applicability).

Allocations from released AUPs/UUPs are automatically propagated to the corresponding RSA activation tables.

In case there exists a restriction with a dependant applicability referring to the RSA, the activation of this restriction will be based on the propagated times and levels.

Note that the RSA activation can also still be updated manually, even through a live update. However, the propagated RSA activation overwrites the manually input one for the concerned AUP/UUP validity period.



During AIRAC cycle, NM systems shall allow airspace reservations outside the AIP published times/vertical limits according to temporary modifications published via NOTAM. But NM ADS staff will not be responsible for checking existence as well as content of the NOTAM. NM systems do not process these NOTAMs. Hence this is entirely an AMC responsibility (Notam Check box shall be selected and flag “extendedVerticalLimits” to Restriction DependentApplicability shall be added).

FUA Restrictions shall apply to the modified limits and the automatic Route CDR expansion will apply to the modified limits. Only warnings will be returned.

Temporary expansion of RSA limits shall not modify the limits of the permanent RSA for download.

4.1.9 Airblocks

In the official publication in the national AIPs, many areas have vertical limits expressed in feet (e.g. 1000Ft ALT).

As of NM-26.0 NM Systems support Ft AMSL (altitude) and Ft AGL (height) in addition to FL:

- **in the basic RSA Airspace data definition,**
- **in the AUP/UUP RSA Allocations**

Airblocks slices are defined with 2 sets of vertical limits:

- **Vertical Limits as published in AIPs with unit of measurement FL, Ft AMSL (altitude) or Ft AGL (height)**
- **Processing levels are always expressed in FL.**

<u>NM CACD System</u>

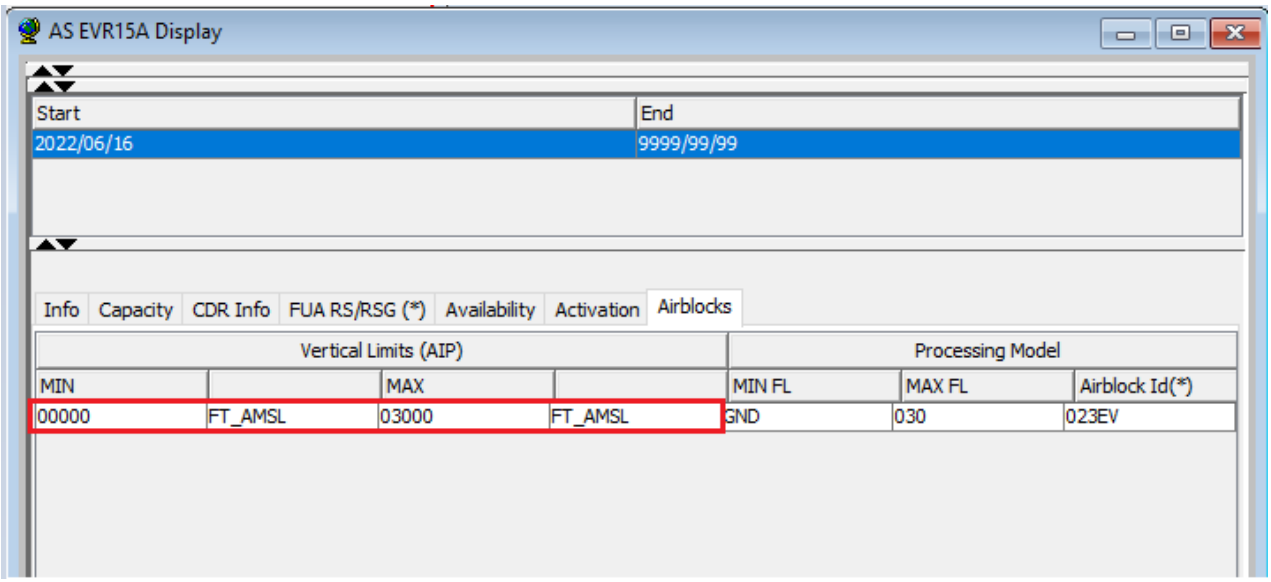
NM CACD System supports the definition of vertical limits in feet in the basic Airspace data as unit of measurement (UOM) in addition to FL.

All CACD Airspace data validations remain based on the processing levels in FL.

Other types of AS where vertical limits are specified also have these FT columns.

RSA in EV AIP

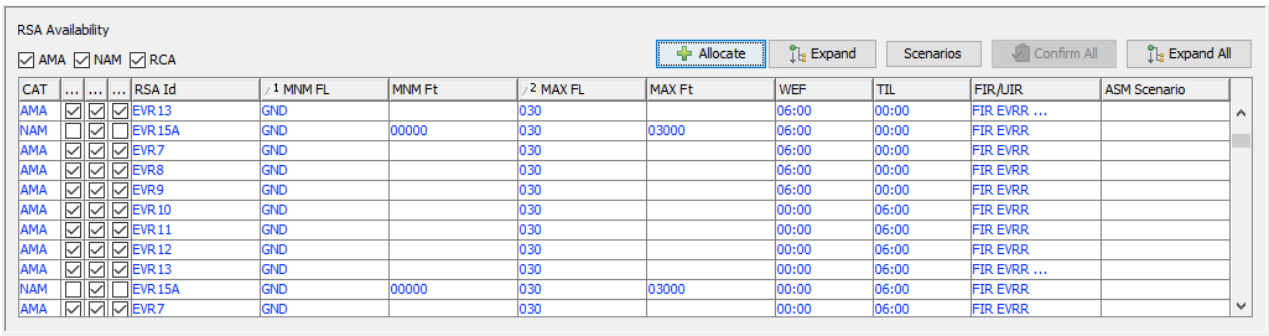
EVR15A ZALENIEKI Lateral limits are available in the AIP Data set, feature ID: b2205e33-11f-b-42c9-87fe-e03701d5776b	3000 FT MSL / GND	MON-FRI 00:00-23:59. Area designated for UAVFACTORY LTD unmanned aircraft only.



CIAM

Two additional columns with RSA vertical limits expressed in FT (where applicable) will appear next to the ones displaying vertical limits in FL, both in RsaAllocation list and RsaAvailability list in AUP/UUP, and will be usable for entries for those areas published in AIP with feet as unit of measure. This will allow national AMCs to use feet AMSL or AGL in addition to FL in the AUPs/UUPs.

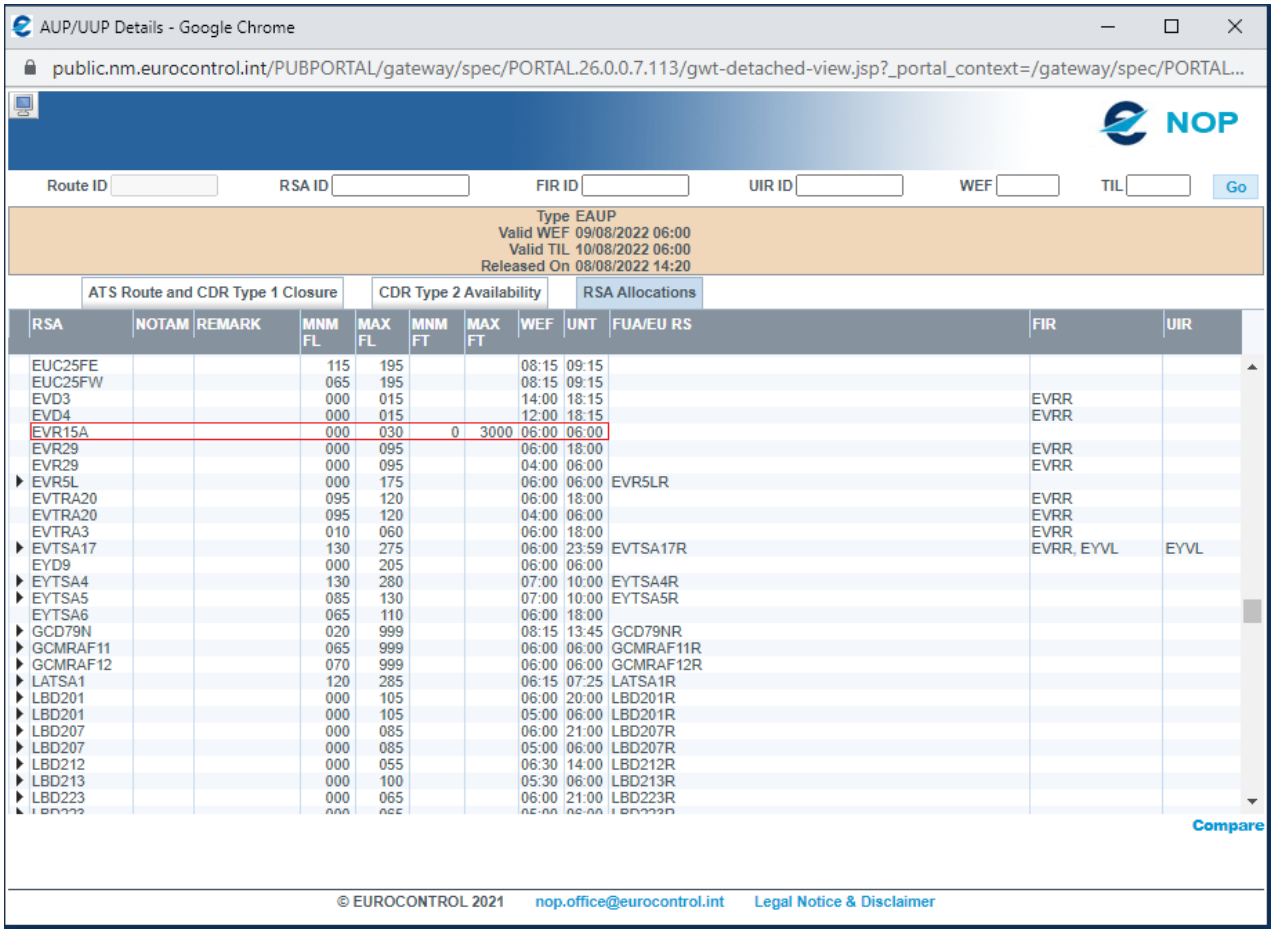
IFPS validation of FPLs will be still be performed using FL information.



CAT	...	...	...	RSA Id	1 MNM FL	MNM Ft	2 MAX FL	MAX Ft	WEF	TIL	FIR/UIR	ASM Scenario
AMA	☑	☑	☑	EVR13	GND		030		06:00	00:00	FIR EVRR ...	
NAM	☐	☑	☐	EVR15A	GND	00000	030	03000	06:00	00:00	FIR EVRR	
AMA	☑	☑	☑	EVR7	GND		030		06:00	00:00	FIR EVRR	
AMA	☑	☑	☑	EVR8	GND		030		06:00	00:00	FIR EVRR	
AMA	☑	☑	☑	EVR9	GND		030		06:00	00:00	FIR EVRR	
AMA	☑	☑	☑	EVR10	GND		030		00:00	06:00	FIR EVRR	
AMA	☑	☑	☑	EVR11	GND		030		00:00	06:00	FIR EVRR	
AMA	☑	☑	☑	EVR12	GND		030		00:00	06:00	FIR EVRR	
AMA	☑	☑	☑	EVR13	GND		030		00:00	06:00	FIR EVRR ...	
NAM	☐	☑	☐	EVR15A	GND	00000	030	03000	00:00	06:00	FIR EVRR	
AMA	☑	☑	☑	EVR7	GND		030		00:00	06:00	FIR EVRR	

NOP Portal

Two additional columns for lower and upper limits in feet, for those areas published in AIP with feet as unit of measure, added in EAUP/EUUP. This will ensure the consistency between AUP/UUP and EAUP/EUUP.



RSA	NOTAM	REMARK	MNM FL	MAX FL	MNM FT	MAX FT	WEF	UNT	FUA/EU RS	FIR	UIR
EUC25FE			115	195			08:15	09:15			
EUC25FW			065	195			08:15	09:15			
EVD3			000	015			14:00	18:15		EVRR	
EVD4			000	015			12:00	18:15		EVRR	
EVR15A			000	030	0	3000	06:00	06:00			
EVR29			000	095			06:00	18:00		EVRR	
EVR29			000	095			04:00	06:00		EVRR	
EVR5L			000	175			06:00	06:00	EVR5LR		
EVTRA20			095	120			06:00	18:00		EVRR	
EVTRA20			095	120			04:00	06:00		EVRR	
EVTRA3			010	060			06:00	18:00		EVRR	
EVTSA17			130	275			06:00	23:59	EVTSA17R	EVRR, EYVL	EYVL
EYD9			000	205			06:00	06:00			
EYTSA4			130	280			07:00	10:00	EYTSA4R		
EYTSA5			085	130			07:00	10:00	EYTSA5R		
EYTSA6			065	110			06:00	18:00			
GCD79N			020	999			08:15	13:45	GCD79NR		
GCMRAF11			065	999			06:00	06:00	GCMRAF11R		
GCMRAF12			070	999			06:00	06:00	GCMRAF12R		
LATSA1			120	285			06:15	07:25	LATSA1R		
LBD201			000	105			06:00	20:00	LBD201R		
LBD201			000	105			05:00	06:00	LBD201R		
LBD207			000	085			06:00	21:00	LBD207R		
LBD207			000	085			05:00	06:00	LBD207R		
LBD212			000	055			06:30	14:00	LBD212R		
LBD213			000	100			05:30	06:00	LBD213R		
LBD223			000	065			06:00	21:00	LBD223R		

4.1.10 AMC-RSA Relationship

An explicit relationship must be entered between an AMC and an RSA to define the responsible AMC of the RSA. Each RSA must have one and only one AMC at each specific time.

Based on this principle, in case of CBAs a lead AMC needs to be defined. For the live update of lead AMC definition see paragraph 6.7.

This relationship is entered in the Unit (type AMC) datasheet, Related Airspaces & Aerodromes tab.

This enables the responsible AMC to retrieve the available RSAs in their daily AUPs, and to allocate them. It also enables the display of RSA availability and allocation on the CHMI ASM monitor by selection of an AMC.

4.1.11 FMP-RSA Relationship

An explicit relationship can be entered between an FMP and an RSA to trigger the display of the RSA availability and allocation on the CHMI ASM monitor for a specific FMP. This relationship is entered in the Unit (type FMP) datasheet, Related Airspaces & Aerodromes tab.

4.2 Air Routes

4.2.1 Data Sources

CACD data includes ATS, RNAV and Conditional Routes as published in National Aeronautical Information Publications (AIPs), AIP Supplements, and NOTAM.

In addition, a NOTAM monitoring is performed by the CADF in order to process temporary ATS Route or CDR1 closures. These closures are input manually in the CACD by CADF staff, if not processed via AUP/UUP.

CDR2 openings are automatically propagated from released AUPs/UUPs to the CACD air route definition and make these CDR2s available for flight planning.

4.2.2 CACD Air Route Datasheet

Air route definitions are available in CACD Air Route datasheets.

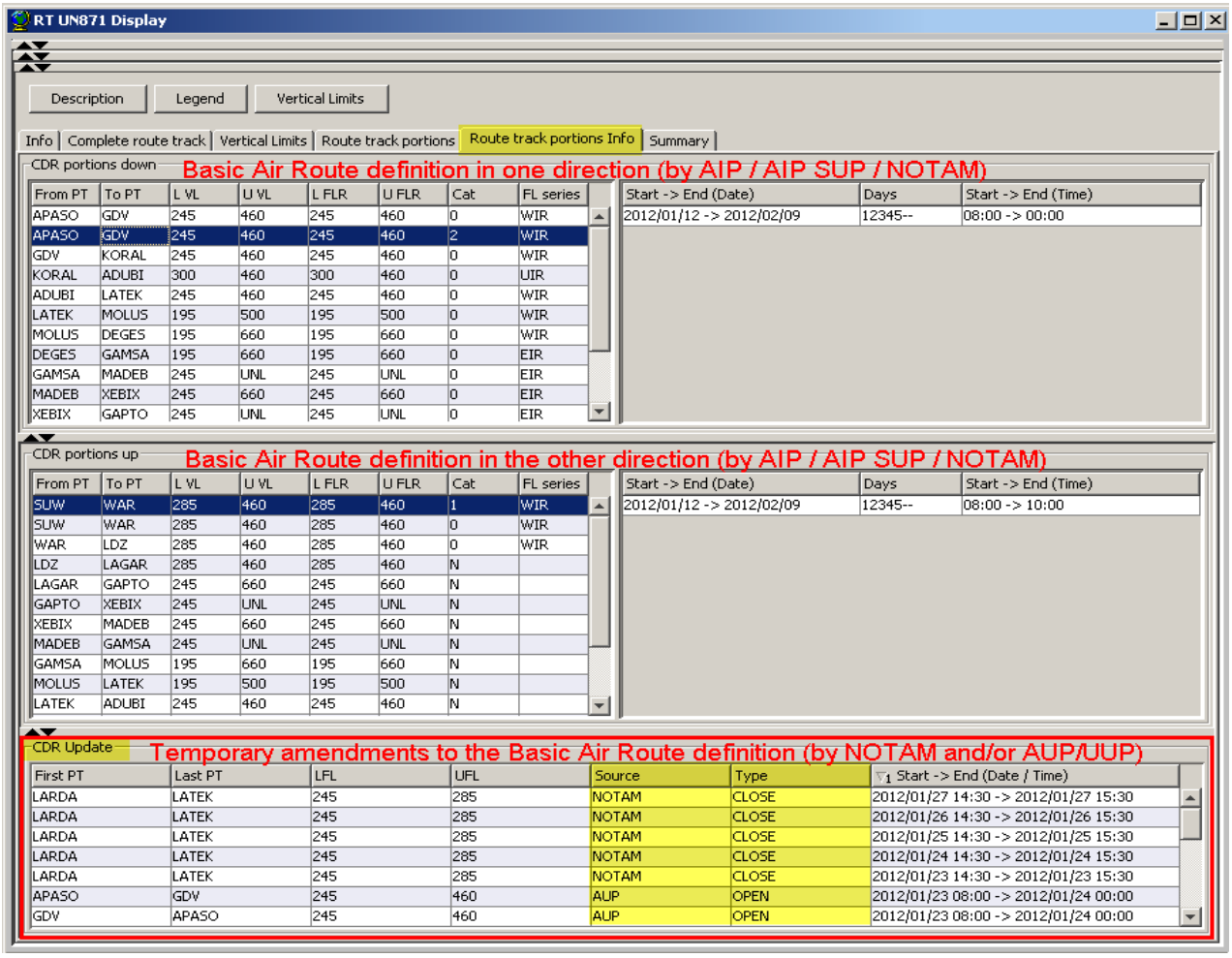
In particular, the route track portions Info tab includes:

- Basic air route definition in both directions (CDR portions down and CDR portions up panels);
- ATS route or CDR1 closures, as well as CDR2 openings (CDR Update panel).

Note that the day/time applicability of the selected lines in the CDR portions down/up is triggered by a right-click > Expand all portions.

The CDR update panel may include:

- CDR1 or ATS route segments with source NOTAM or AIP SUP and type CLOSE, which are input manually by CADF staff;
- CDR2 openings with source AUP or UUP and type OPEN, which are automatically propagated from the corresponding AUP or UUP when it is released.



Example Air Route - Route track portions Info tab

4.3 FPL Buffer Zone (FBZ)

4.3.1 Data Sources

FPL Buffer Zone (FBZ) is the associated airspace which may be applied to a reserved/restricted airspace. The FBZ defines the lateral and vertical limits for the purpose of submitting a valid IFR FPL when such areas are active or planned to be active.

An FBZ must always be published by national AIS publication (AIP, AIP supplement or NOTAM).

4.3.2 Naming Conventions

The FBZ includes the volume of the owner's RSA.

The ID of the FBZ is the owner's RSA ID + Z (end character). Example:
Owner RSA: EFTSAJ03
FBZ: EFTSAJ03Z

4.3.3 Activation

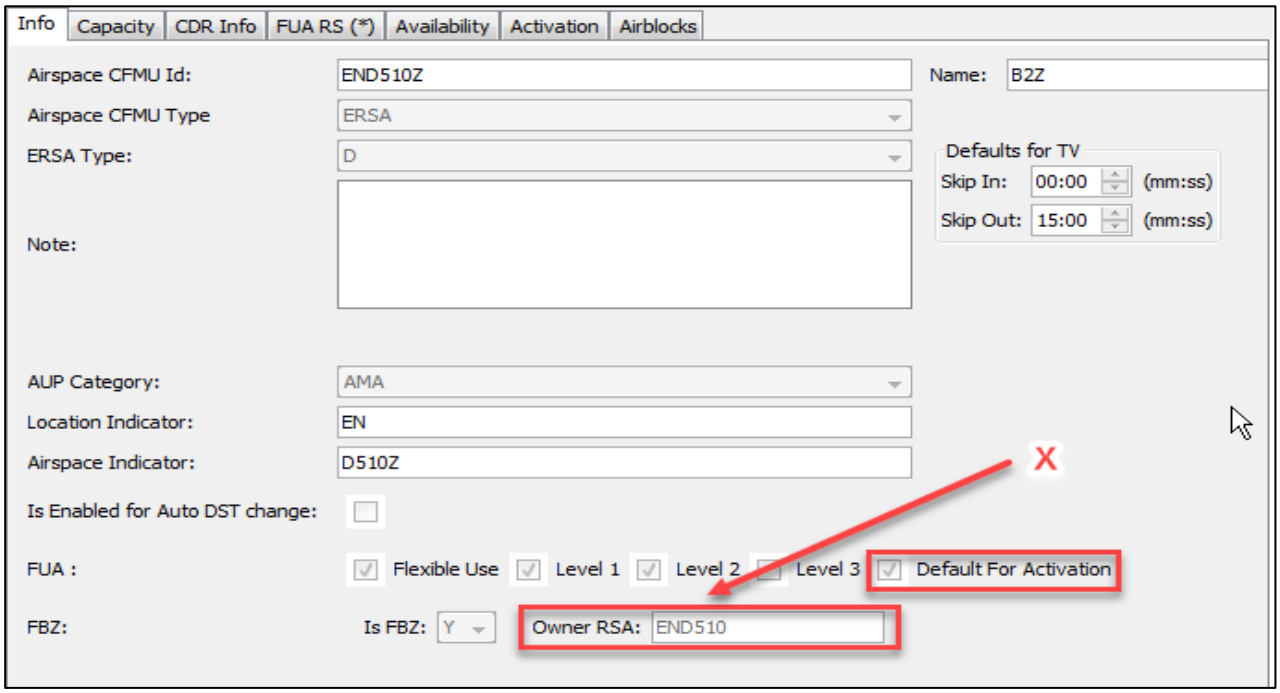
The default active area (either the FBZ or the owner RSA) is implemented in the CACD and updatable on request of an AMC. This is done in the FBZ by setting the parameter 'FBZ Default Active' to Y (default active area is FBZ) or N (default active area is the owner RSA).

The objective of setting either the FBZ or the owner RSA as 'default active' is:

- For display purposes: in the CIAM AUP/UUP list of areas the default active area is displayed in blue, the non-default in black (note that once allocated they are displayed in green like any other allocated area).
- For the system to know which area to use in the implicit allocation of a non-AMC manageable area (NAM = ASM level 1).

4.3.4 Allocation

- Local Airspace management systems contain reservations overlapping in time and levels of the same area for different military activities.
- Information about RSAs and associated FBZs are used locally in order to inform simultaneously different types of Airspace Users interested in each of them for different purposes:
  - RSAs for any user authorised for requesting reservation
  - FBZs for GAT users
- Allowing and supporting different allocations (RSA/RSA, FBZ/FBZ, RSA and associated FBZ(s)) to overlap with each other by time and/or level.
- Support that both RSA and FBZ are default for allocation. The tick box *Default For Activation* indicates whether an FBZ and/or its associated RSA is the default active for AUP/UUP processing.



- In details:
- If *Default for Activation* flag is selected for a RSA or FBZ, then this area is the default active area within the RSA and its associated FBZ(s);
- There can be more than one default active RSA/FBZ within the RSA and its associated FBZ(s) but typically, only one RSA or FBZ is the default active;
- At least one RSA/FBZ within the RSA and its associated FBZ(s) must have *Default For Activation* flag selected.

- Objectives:
- For display purposes: in the CIAM AUP/UUP list of areas, the default active area is displayed in blue, the non-default in black (note that once allocated they are displayed in green like any other allocated area);
- For the system to know which area(s) to use in the implicit allocation of a non-AMC manageable area (NAM = ASM level 1);
- Add warning message when FBZ is de-allocated while RSA is not;
- Support multiple FBZ associated to a single RSA. In this case, the FBZ Id will end with 'Z'+ 1 numeric excluding 0 (i.e. EGD701Z1);
- UUP in DRAFT/READY status should trigger a warning if the RSA is cancelled and at least one associated partial FBZ remains active.

In case of partial overlap between Area and FBZ, such an overlap can be either horizontal or vertical.

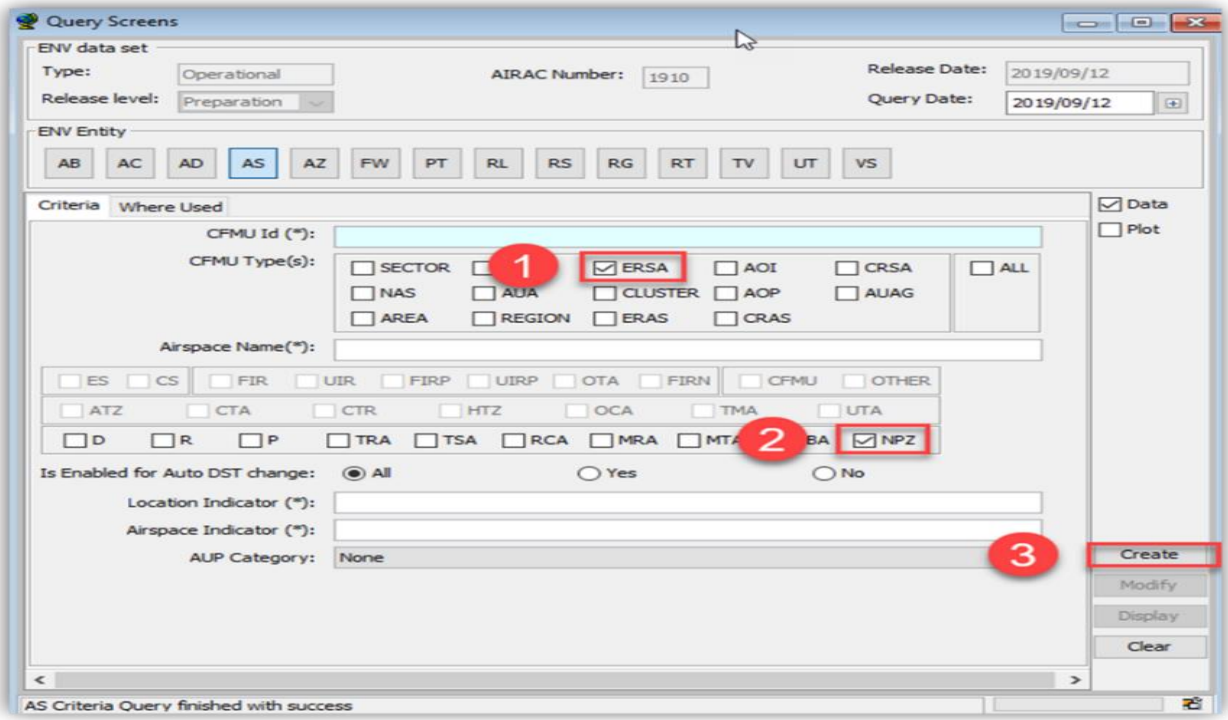
4.4 No Planning Zone (NPZ)

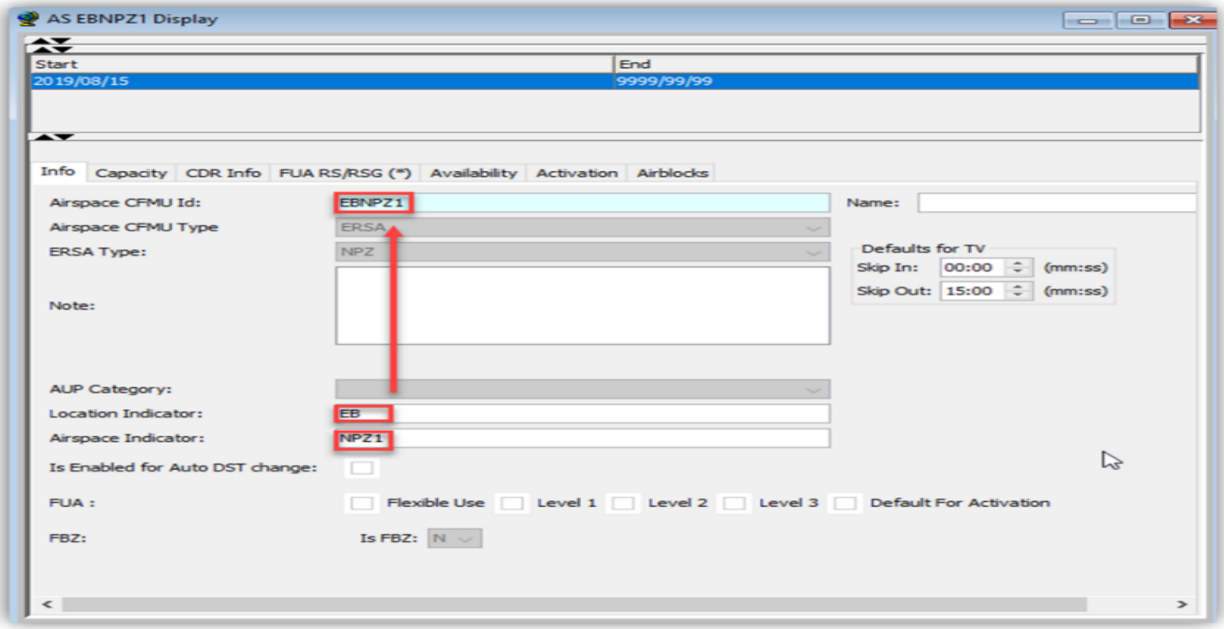
ATC wants to forbid flights from entering parts of its sector (small area in orange) called No Planning Zone (NPZ). Those areas are published in the AIP and they are available in CACD as such.

Introduction of No Planning Zone – NPZ – concept in CACD, as a new sub-type of ERSA. Whenever a NPZ is active, FPLs will be rejected by IFPS if crossing this area.

NPZ and associated Restrictions are exported via B2B.

Creation of an NPZ:





Rules :

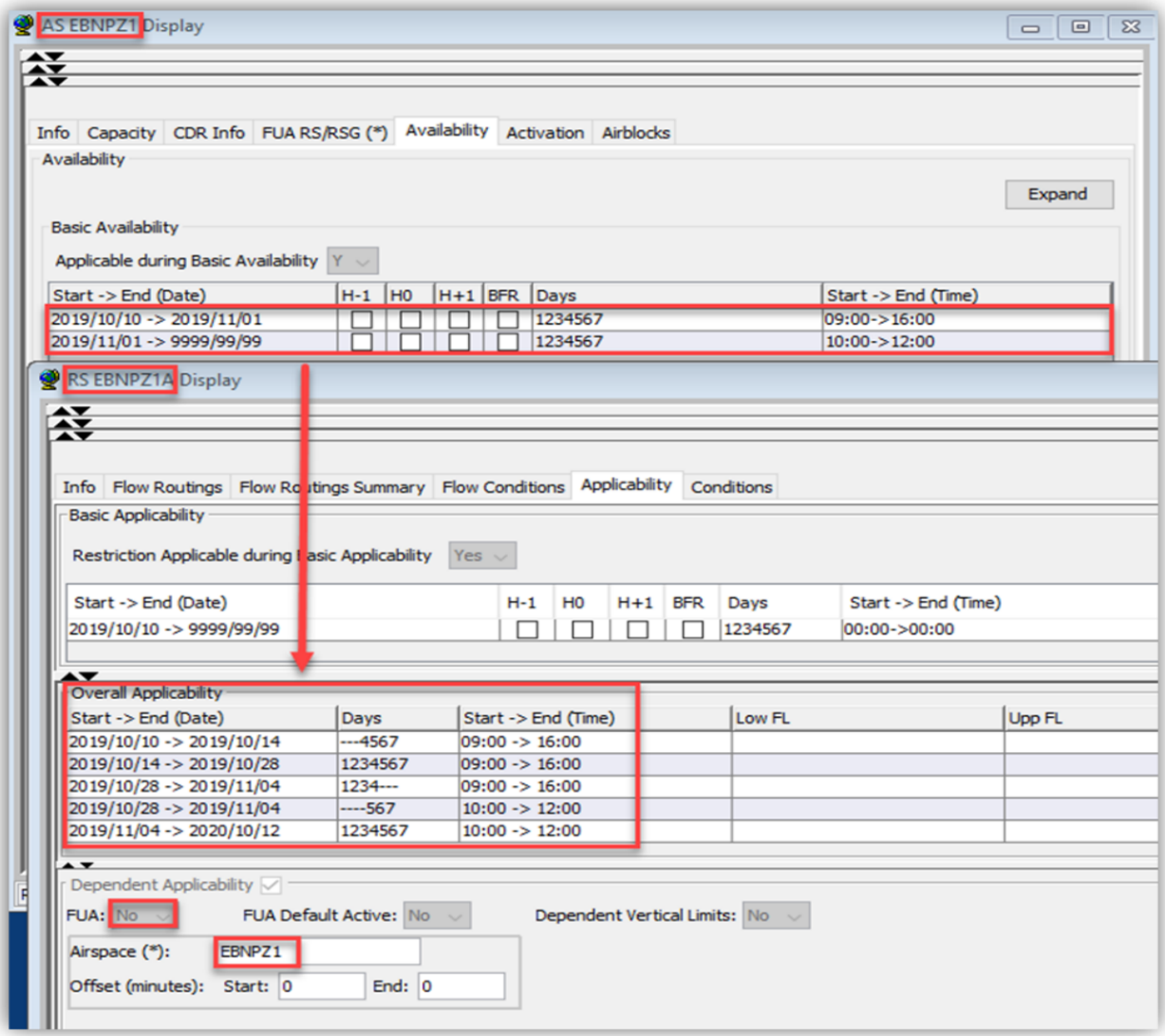
- Location Indicator: Country Code or “EU” in case of cross-border NPZ
- Airspace Indicator: “NPZ”[0-9][0-9][0-9]
- NPZ shall be an ERSA (no composed NPZ)
- NPZ can be of category AMA or NAM
- It can have no Offload, Nearby or Excluded routes associated to it
- NPZ cannot be a FBZ
- The related Restriction identifier shall end with “A” like “EBNPZ1A”

The availability of the NPZ is defined:

- In the tab “Availability” Preparation Area. NPZ’s are published in advance and input in the Preparation Area, based on the information of the AIP.

The activation of the NPZ is done:

- If Category NAM it is active by default but can be released by the AMC
- If Category AMA it is protected by the AMC through the AUP/UUP



4.5 FUA and FUA-RAD Restrictions

4.5.1 Data Sources

FUA Restrictions are used for RSAs published in the AIP and/or AIP Sup and are only created by the CADF/AD team on request of an AMC or a national RAD Coordinator. As agreed in the 15th Joint ASMSG/RNDSG Session, the AMC must pass this request for an FUA Restriction to their internal ANSP RAD Coordinator for publication in the RAD **Annex 2C – FUA Traffic Flow Rules[3].**

4.5.2 FUA and FUA-RAD Restriction Types

An FUA Restriction is a Traffic Flow Restriction which has the same behaviour as an EU Restriction concerning FPL validation. **With the activation of a FUA Restriction, all the FPLs affected by the restriction will be rejected, unless related to any exclusions defined in the restriction. The activation of a FUA Restriction is triggered by the allocation of the reserved/restricted area and/or associated FBZ through AUP/UUP. FUA Restrictions are published in Route Availability Document Annex 2C – FUA Traffic Flow Rules.**

A FUA-RAD Restriction is a "Traffic Flow Restriction" managed via AUP. **The activation of a FUA-RAD restriction is triggered by the allocation of the reserved/restricted area and/or associated FBZ through AUP/UUP. FUA-RAD Restrictions are published in the in the Route Availability Document Annex 3B – En-route DCT Options and Annex 2B – Local and Cross-border Capacity and Structural Rules.**

A Restriction - RS can be "FUA" or "FUARAD", not both at the same time

A FUA Restriction must have:

- A Reference location - RL (an RSA or FBZ or NPZ).
- Dependent applicability based on RSA or FBZ or NPZ activation.
- A FUA Restriction ID starting with an RSA or FBZ or NPZ ID and ending with the character 'R' (then S, T, U, V, W, X, Y. if there are multiple FUA Restrictions it should be followed by A.B.C..)(These letters won't be published in RAD document **Annex 2C – FUA Traffic Flow Rules**). There is a limit of 10 characters in total.

A FUA-RAD Restriction must have:

- **A FUA-RAD Restriction ID composed of maximum 9 digit alpha/numeric identifier which comprises the ICAO nationality letters for location indicators assigned to the State of origin or 2 letter Regional / FAB naming convention prefix code, together with an up to 5 digit number (LF50001, DU52345, RE54999, DSYX50000). Detailed criteria to be used for the selection of the letters are described in ERNIP Part 1, Chapter 8 – Route Network and Free Route airspace utilisation rules and availability.**

[3] **See ERNIP Part 1, Chapter 8 – Route Network and Free Route airspace utilisation rules and availability**

Note: In case of more than 8 FUA restrictions per RSA, the NM RAD team in coordination with the relevant NRC's and/or other NMOC Teams is authorised to use other letters starting with Q on reserved order (Q, P, M, N, etc…., but NO O and I).

In the dependent applicability of the FUA or FUA-RAD Restriction, the 'FUA Default Active' parameter (Yes/No) determines whether the Restriction is active by default when creating an AUP/UUP. If required, the resulting activation or non-activation of the Restriction in an AUP/UUP can be changed there by selecting or deselecting the corresponding checkbox.

A basic Restriction will invalidate FPLs that have a profile calculated to be inside the airspace volume of the concerned area when it is activated in an AUP/UUP.

Examples of basic FUA Restrictions:

- EHR8R
- EHR8S
- EHR8Z**R**
- EHR8Z**S**

When more than one restriction used for same RSA (different scenarios), the last letter used based on the following rules:

- **R** - describes the most restrictive limitation/s in RSA availability;
- **S** - describes the less restrictive limitation/s different from those under letter "R";
- T, U, V, W, X, Y - same descending logic as for letter "S".

Example of a complex FUA restriction (one scenario)

- EBTRANA**RA**
- EBTRANA**RB**

For this example, impossible to define the requested scenario with one FUA restriction (to complex). Two FUA restrictions created. The **R** stands for one scenario, the **A** and **B** indicates that we have a complex scenario

Always both FUA restrictions applied in AUP/UUP.

Only EBTRANA**R** published in the RAD document **Annex 2C – FUA Traffic Flow Rules**.

Examples of FUA-RAD Restrictions

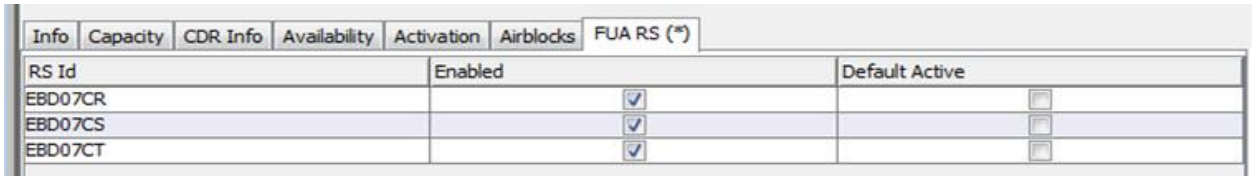
- **EH5005**
- **EH5006**
- **EH2000**
- **EH2002**

EH5005 and EH5006 are published in the RAD Document Annex 3B – En-route DCT Options, while EH2000 and EH2002 are published in the RAD Document Annex 2B – Local and Cross-border Capacity and Structural Rules.

4.5.3 Implementation of FUA Restrictions in CACD and usage in CIAM

RSA: FUA RS tab

In the image below, three FUA Restrictions have been created for the RSA EBD07C, but none of them have been set as 'Default Active' in the CACD, meaning that they will not be shown in CIAM as 'Activated'.



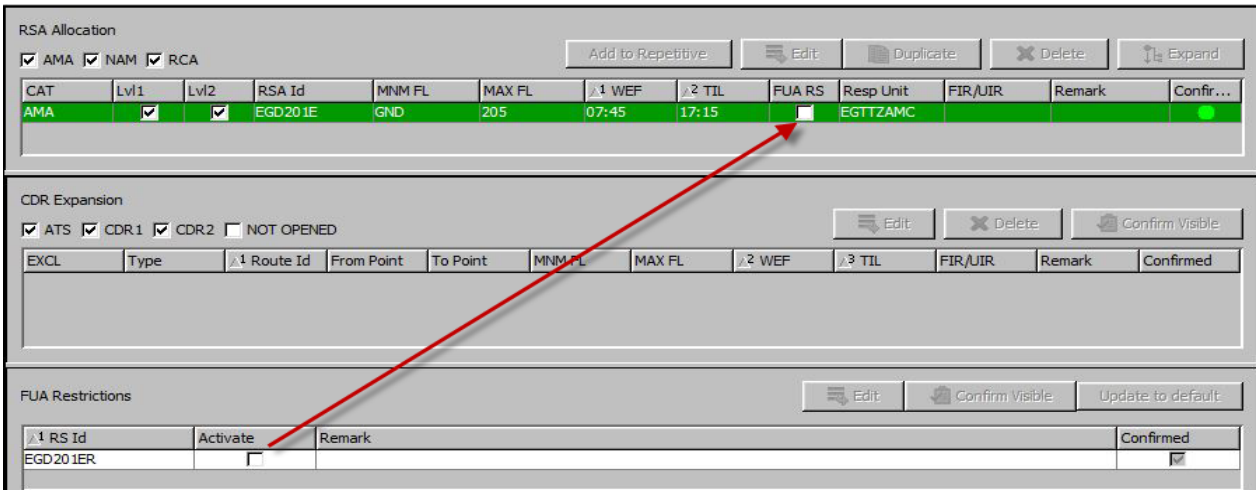
This activation setting in the CACD can be overruled in a CIAM (ASM tool) AUP/UUP by the AMC.

AUP/UUP RSAs tab

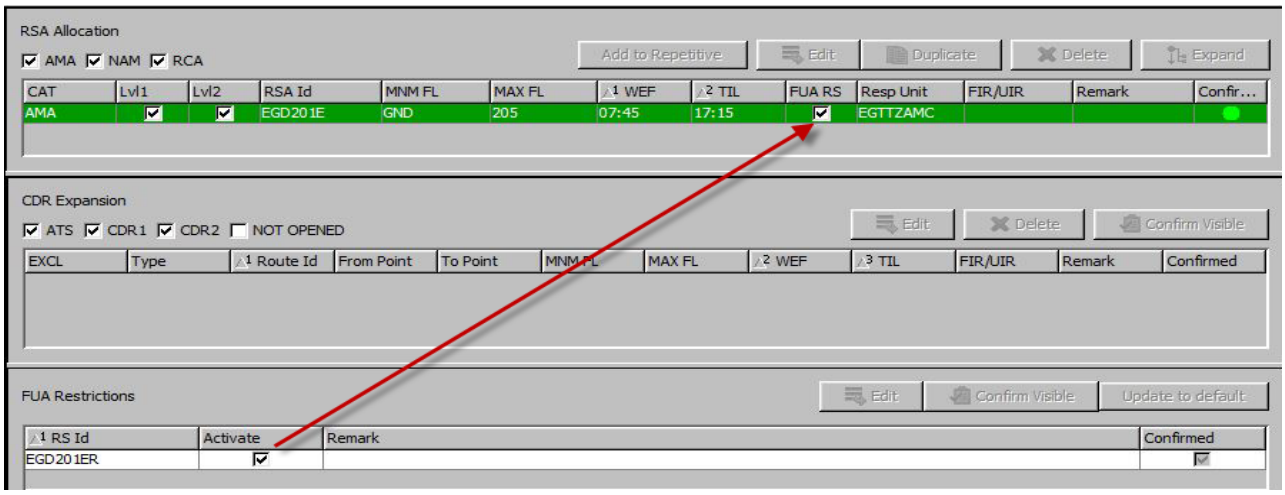
The activation or the FUA Restrictions (as defined in the CACD) can still be overruled in CIAM or any other ASM tool by the AMC, and each Restriction (even those not activated) must be confirmed by the AMC.

In the 'RSA Allocation' pane, the 'FUA RS' column displays the following information:

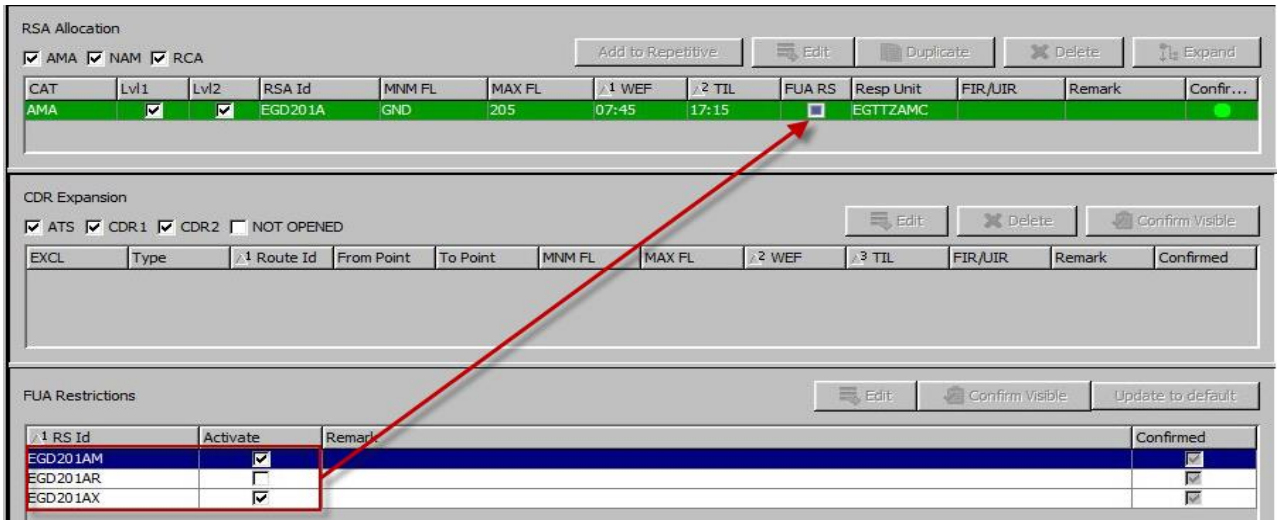
Blank: No FUA Restrictions associated with this RSA are active.



Check Box: All FUA Restrictions associated with this RSA are active.



Shaded square sign: Some, but not all, FUA Restrictions associated with this RSA are active.



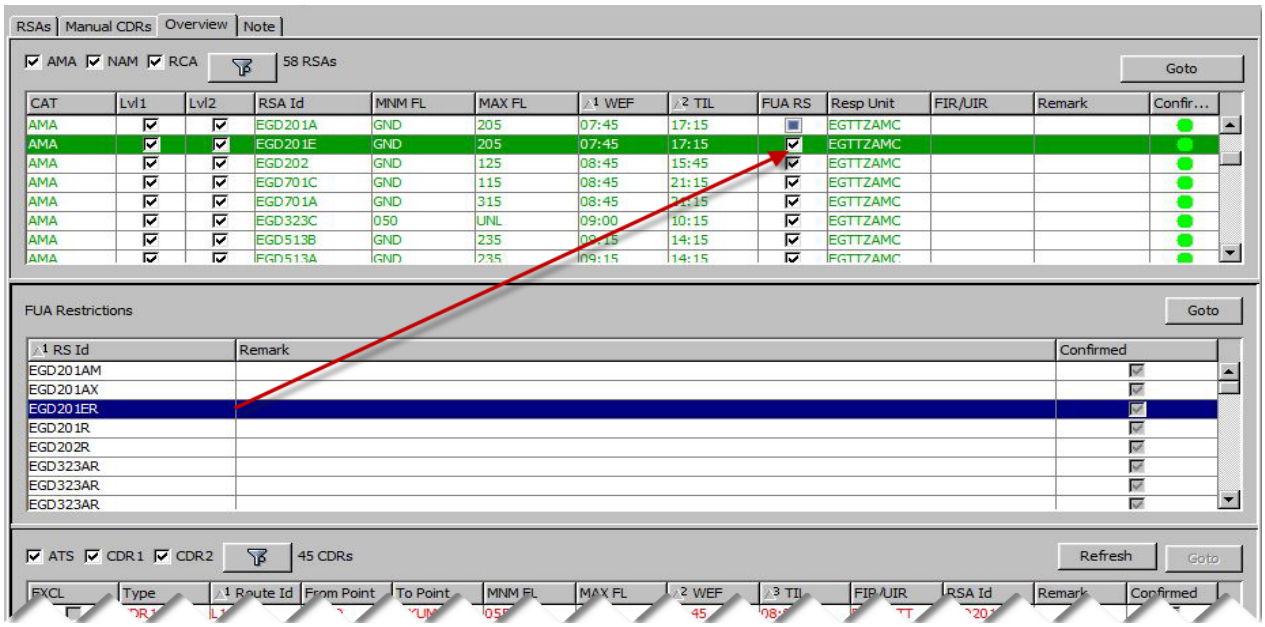
AUP/UUP Overview tab

In the Overview tab, the active FUA Restrictions are displayed in the 'FUA Restrictions' panel.

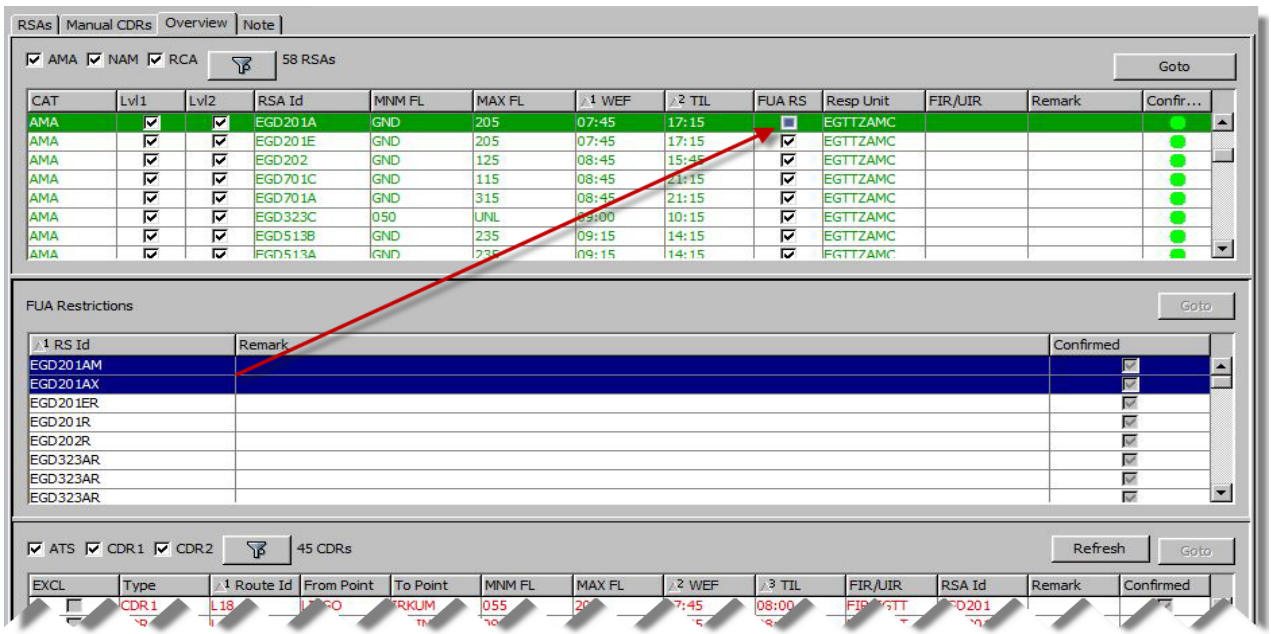
The same convention is used in the 'FUA RS' column of the RSA allocations panel as in the RSAs tab (see above), and the following information will be shown.

Blank checkbox in the 'FUA RS' column and no highlighted restrictions in the 'FUA Restrictions' panel : No active FUA Restrictions exist for this RSA.

A check box sign in the 'FUA RS' column and one or more highlighted restrictions in the 'FUA Restrictions' pane: All FUA Restrictions associated with this RSA are active.



A shaded square in the 'FUA RS' column and one or more highlighted restrictions in the FUA Restrictions pane: Some, but not all, FUA Restrictions associated with this RSA are active.



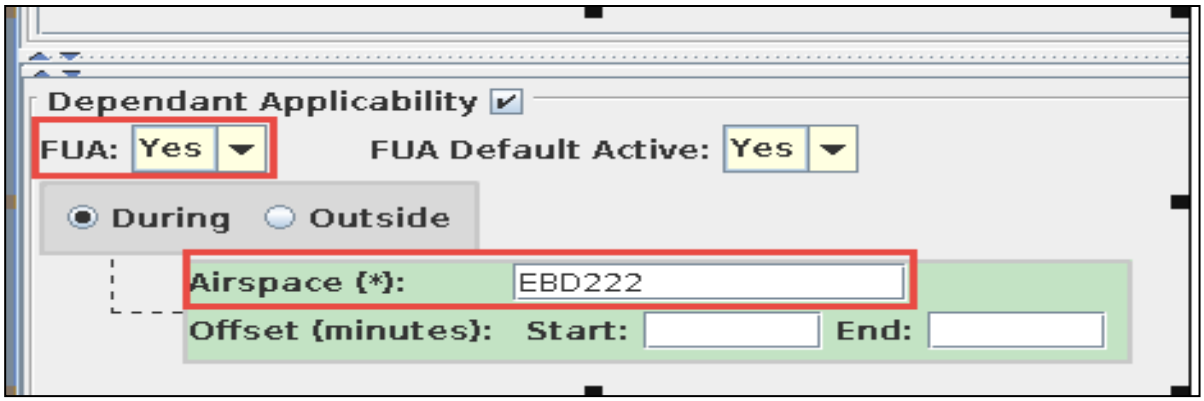
4.5.4 Multiple AS/RT for Restriction Dependant Applicability

It is possible for a Restriction Dependent Applicability to reference more than 1 Restricted Airspace (TSA, TRA, CBA, D, R, P) or CDR.

Addition of a **composite dependent applicability** table in Restrictions type H/S or PT.

How does it work?

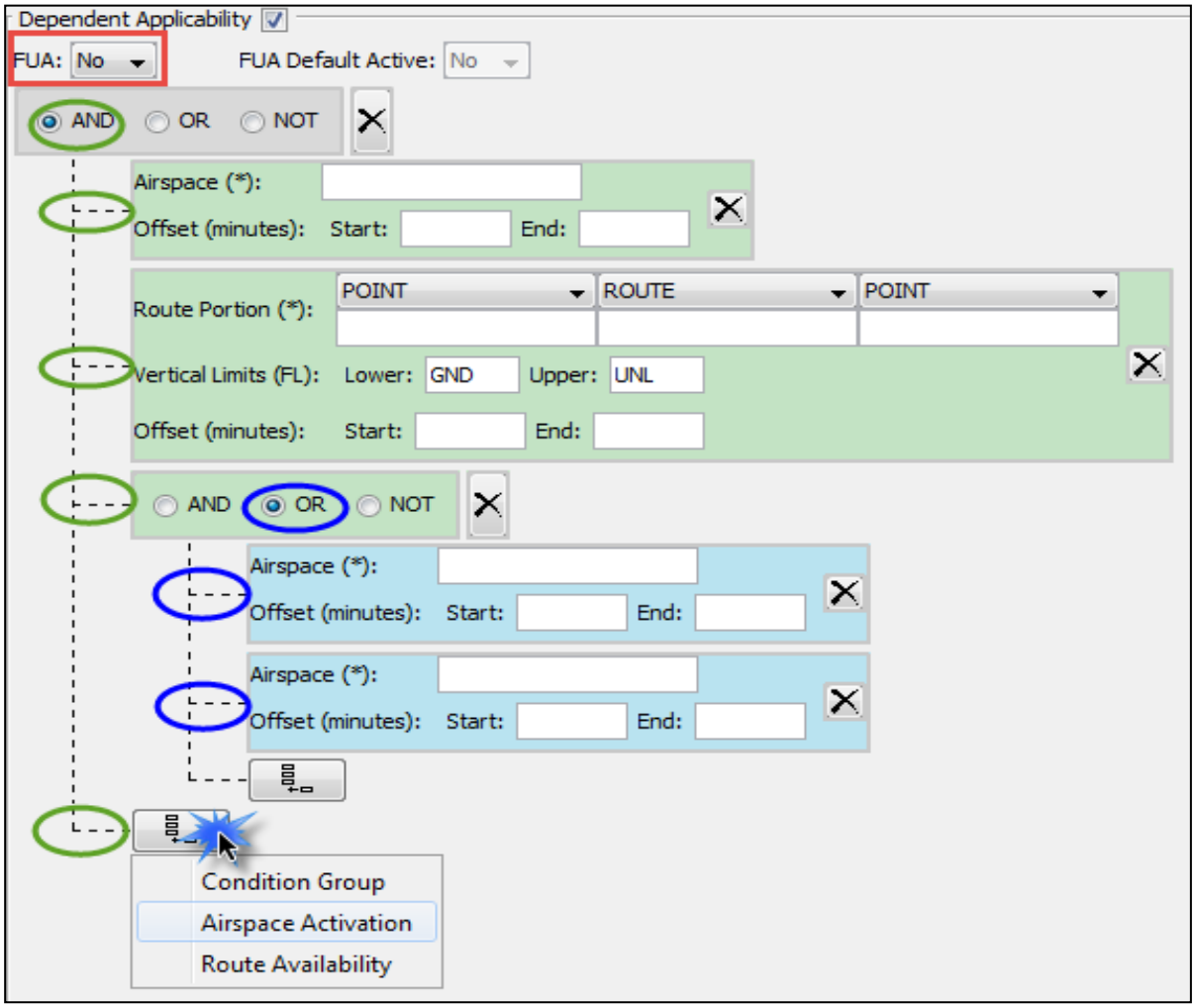
- If FUA ='YES', no change, there can be only one Airspace allowed, it shall be the reference location of the Restriction (as per today).



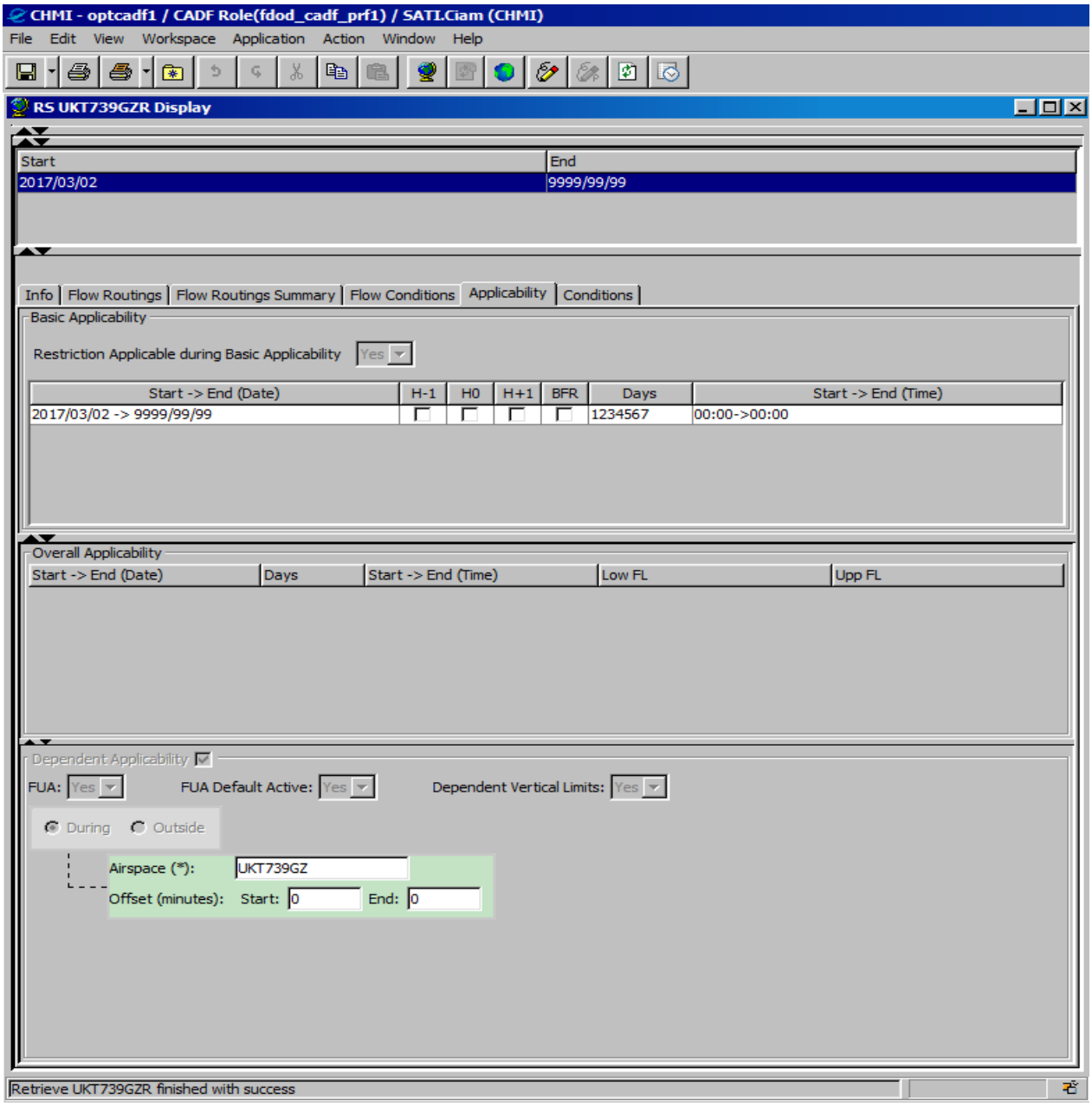
- If FUA ='NO', there can be at least one airspace or at least one route.

Note: In box Airspace, Airspace actually means "Airspace Activation".

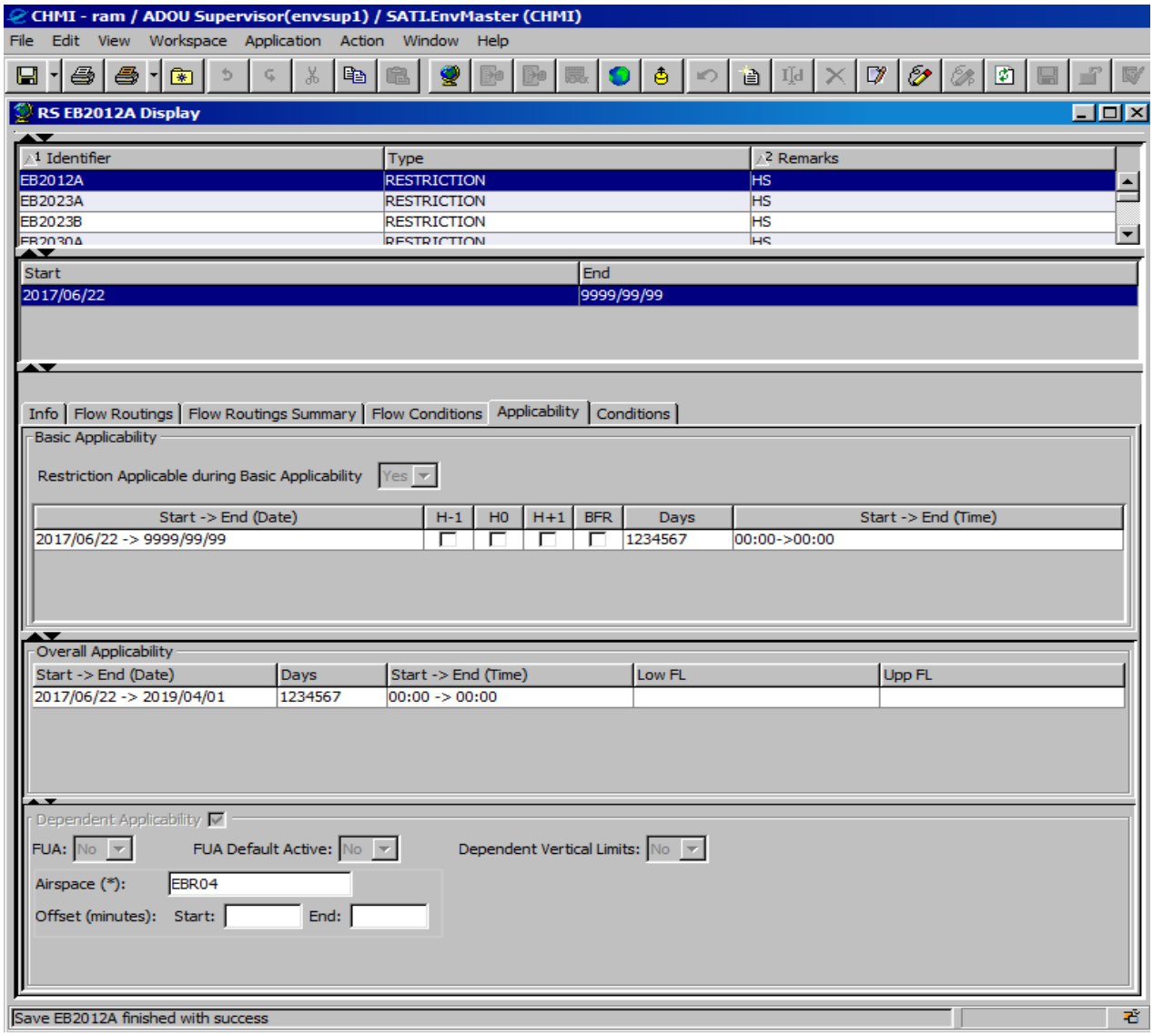
In box Route Portion, Route Portion actually means"Route Portion Availability".



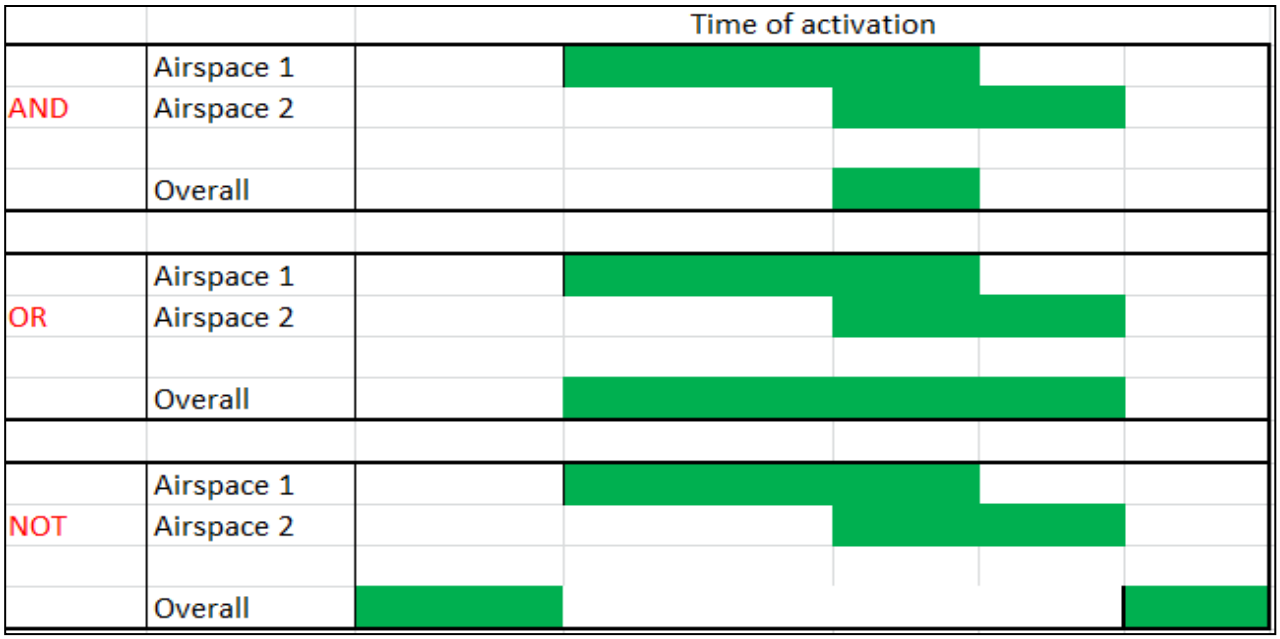
Example FUA set to YES:



Example FUA set to NO:



- When operation is **'AND'**, it means “active together”, the dependent applicability corresponds to the **intersection** of the applicability’s derived for the combined element
- When operation is '**OR**', the dependent applicability corresponds to the **union** of the applicability’s derived for the combined element
- When operation is ‘**NOT**’, it means “outside”, the dependent applicability corresponds to the **inversion** of the applicability derived for the combined element



4.5.5 Restriction Grouping

A Restriction Group can contain any combination of several types of Restrictions;

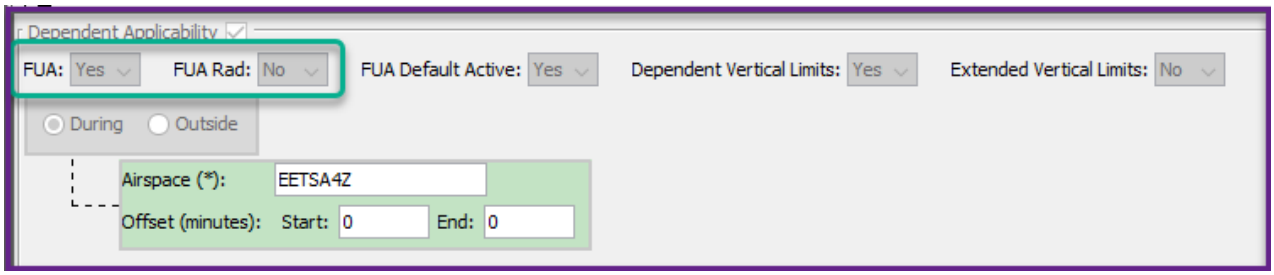
Category: FUA or FUA-RAD

- FUA can only group FUA restrictions
- FUA-RAD can group FUA restrictions and RAD restrictions that have a dependant applicability referring the same RSA.

Note: Other potential future categories are:

- FRA: Restrictions that are part of a FRA definition
- RAD: Restrictions Units that can be grouped as they are part of a single RAD restrictions

A Restriction Grouping can be activated simultaneously in the AUP/UUP



5 FUA Temporary Instructions (FTI)

5.1 Background

The Flexible Use of Airspace Sub-Group (FUSG/ 22) asked the NM/CADF to review at regional AMCs/CADF workshops the day to day coordination problems and to find solutions through the application of appropriate procedures, if necessary on a trial basis, between the CADF and the AMCs.

FUSG/23 agreed to the use, on a nine-month trial basis from 1st February **1998**, of the 'FUA Temporary Instruction' (**FTI**) procedure. After the successful trial, FUSG/26 agreed to formalise the 'FUA Temporary Instruction' (**FTI**) procedure.

ANT/18 approved the FTI procedure on **2nd February 1999** (see EUROCONTROL ERNIP Part 3 – ASM Handbook).

5.2 Basic AMC/CADF Procedures

The ASM Handbook covers all functions and associated ATM procedures that are needed to apply and fully exploit the FUA concept. It contains inter alias the AMC/CADF procedures as endorsed by the Network Operations Team (**NETOPS**).

These basic procedures are permanent, common to and binding for all AMCs and the CADF.

5.3 Temporary AMC/CADF Procedures

Operational instances may arise which, for the benefit of the users, require the CADF and AMCs:

a. To deviate temporarily from the basic procedures.

or

b. To apply a new procedure this has been considered beneficial by the experts of AMCs and of the NM/CADF prior to being endorsed as a new basic procedure.

or

c. To apply a new procedure this could be of temporary validity and/or of such operational impact, which would not justify its transformation into a permanent procedure.

These procedures are FUA Temporary Instructions (FTIs). FTIs will be agreed/applied by appropriate AMCs and the NM/CADF for all or for a part, of the FUA area.

5.4 FTI Process

Actions

In the event that an FTI is needed, the following steps shall be followed:

1. ASMSG, ODSG, or another group agrees on a change or on trial in regards to the ASM or an AMC approaches CADF with a request for temporary procedures, e.g. during a large-scale exercise.
2. NM assumes that the local AMCs (and when necessary, FMPs) are aware of, and in agreement with, the change or trial. This agreement shall be included within the safety assessment of the Flexible Use of Airspace Temporary Instruction (FTI) published by NOM/SUP.
3. An FTI is drafted by NOM/OTR and/or the AMC concerned.
4. The draft FTI is reviewed and agreed by the AMC(s) concerned, OPL/ASM and AD SNOS.
5. The FTI is published provided that the NM safety statement is positive. In some cases a safety statement may be needed, and the OPL/ASM will be involved.
6. The FTI shall have a clear scope and time period of application.
7. The FTI will go to NM Instruction Team for NM Internal and Final review, numbering and internal NM publication and to the AMC(s) concerned for national publication.
8. The FTIs are published on the "OneSky Teams" ASM-SG/Shared Documents/CADF-AMC Operational Documents, and in a binder at the CADF position and locally at the AMCs concerned according to the local procedures.

5.5 Format and Subsequent Treatment

The format for the FTI, based on the present NM Operational Instruction, is available at Annex 1. The AOs will be addressed by AIM.

When an FTI is intended to be applied on a permanent basis, e.g. after a trial period, NM shall take action for submission to the next Airspace Management Sub-Group (**ASM-SG**) prior to potential incorporation in the ASM Handbook.

Once published in the ASM Handbook and/or CADF manual, the NM will inform the involved parties of the change of status of the FTI and the respective FTI will be cancelled.

5.6 Fields of Application

The NM shall be able to issue FTIs/AIMs in the following domains:

a. NM/CADF - AMC working procedures.
b. FUA/CACD matters (e.g. modification of data, etc.).
c. Use of the CIAM tool/ASM tools.
d. NM/CADF - AO relationship.
e. Changes in AMCs or CADF addresses.

The list of effective FTIs can be found on OneSky Teams.

6 LEAD AMC Concept

6.1 Scope

The need has been highlighted on various occasions of the requirement for the AUPs/UUPs to be harmonised and for the CADF to have a single point of contact, as already applied for Cross Border Ares (CBAs), for each cross-border CDR 2 which extends through the area of responsibility of more than one AMC.

Consequently, some AMCs have agreed by means of an 'AMC Co-ordination Letter of Agreement' to delegate to a 'Lead AMC' on a route by route basis the responsibility for coordinating and publishing the harmonised availability of cross border CDRs 2.

In Annex 3 (published as a separated sheet on the "One sky teams") are the cross-border CDRs 2 concerned, affected RSAs, affected AMCs and for each of them the allocated Lead AMC.

Those cross border CDRs 2 are described in the CACD as 'Lead AMC routes. It is the responsibility of the AMC to advise the CADF about those segments and report modifications impacting those reported segments.

6.2 Procedure

Before 11:00 UTC on the day before the day of operation (Day-1) or 11:00 UTC on the last working day prior to a closing period of the Lead AMC (whichever is earliest), each AMC concerned will provide the national plan on availability for cross-border CDRs to the Lead AMC allocated to that CDR by phone, fax, AFTN or any other means.

In case of inconsistent plans, the Lead AMC, after having studied the problem, shall initiate the necessary coordination with AMCs concerned to achieve the required consistency in cross-border CDRs availability. Final results shall be achieved before 13:00 UTC.

On the day before agreed Busy Days, the Lead AMC coordination process requires particular attention in order to secure additional capacity by inviting the AMCs concerned to seek agreement on early access to sub-sets of cross-border weekend routes for the following day. To that end, two lists of internationally agreed busy days are published every year by the end of March in the form of a FTI for Level 2 Information.

6.3 Lead AMC Routes (Related Routes)

Lead AMC routes will be implemented as "Related routes" to the responsible AMC Unit.

The related Routes are route portions located outside the related NAS and the related RSA's of the AMC, but for which the AMC is responsible.

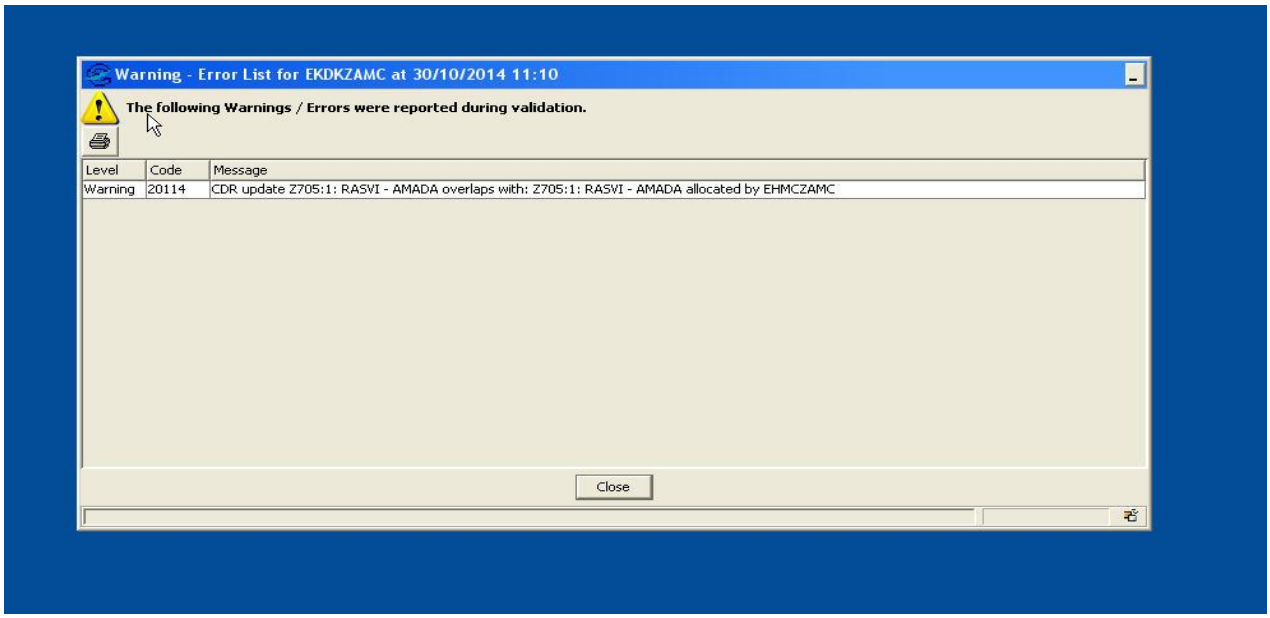
The Related Routes input for a given AMC will enable this AMC to use these routes in their AUPs/UUP's although they are located geographically in another AMC''s area of responsibility. These route portions will become available in CIAM as "Manual CDR's" in the AUP/UUP of the AMC.

In addition (to improve safety) a warning will be given when:

No matter which AMC starts the input (AUP/UUP) the other AMC will get a warning, who's ever AUP is in higher status will trigger the warning for the other AMC AUP/UUP when they will promote or validate theirs.

In case the warning is received by Lead AMC, Lead AMC should take initiative and coordinate with AMC who changed availability of related route.

The warning popped-up at the beginning of the error list.



Warning Message

6.4 Promulgation and Distribution of Information on Cross-Border CDRs Availability

The Lead AMC creates their national AUP/UUP for all the cross-border CDR 2 according to the agreement, including the appropriate route extension within neighbouring FIR/UIR(s). Therefore, an AMC not designated, as Lead AMC shall not include any information in its national AUP/UUP on a cross-border CDR for which a Lead AMC is defined. The current procedures for CDRs other than cross-border CDRs 2 remain unaffected.

If the CADF has a query concerning one or more cross-border CDRs, the Lead AMC for the CDR concerned will be the sole contact point in each case.

Each AMC shall crosscheck the draft-AUP/UUP as far as its own contribution is concerned. The Lead AMC shall be responsible for checking the correct reflection of cross-border CDRs 2 availability in the draft-AUP/UUP.

6.5 Hours of Operation of AMCs – Delegation of Lead AMC Responsibilities

The hours of operations of the AMCs and the designation of an alternate ASM contact point in the event of their closure are specified in the appropriate page of the Supplement to the ASM Handbook.

Unless specified otherwise in bilateral/multilateral Letter of Agreements between AMCs, each AMC shall:

- Keep its neighbouring AMC(s) and the NM/CADF informed on national public holidays/non-operation days by plans of half a calendar year with a minimum of 14 days in advance.

And

- Advise of any changes in the operational status of its facilities, which may affect the Lead AMC procedures.

If, due to a longer foreseen closing period or for any other operational reason, an AMC considers it is unable to assume its Lead AMC responsibilities, a delegation of the Lead AMC responsibility should be formally given to an adjacent AMC and notified to the CADF and the other AMCs concerned.

6.6 Additional Information

Lead AMCs and other AMCs are requested, when applying the above procedures, to report any problems encountered to the NM/CADF in writing.

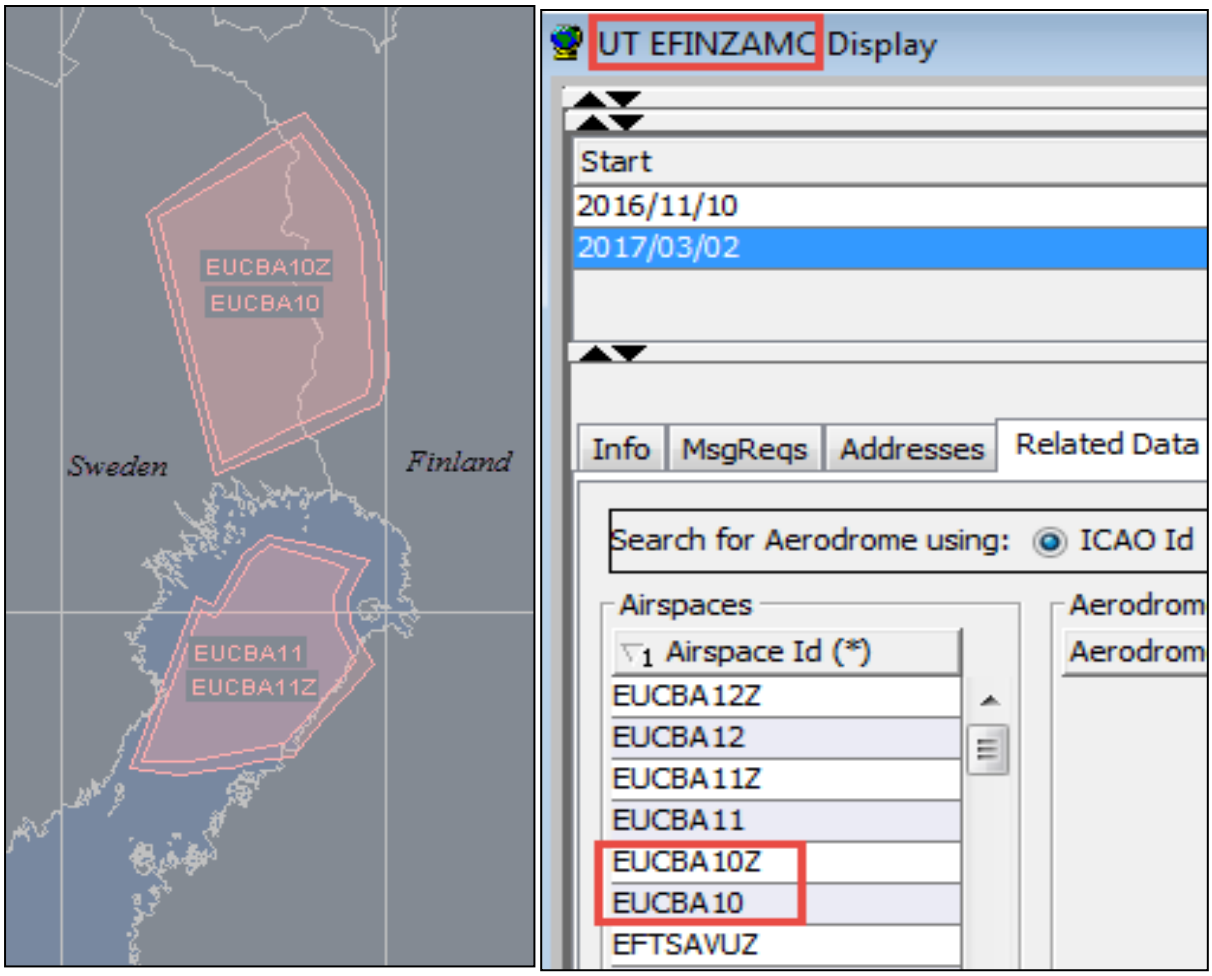
6.7 LEAD AMC Live Updateable

The lead AMC concept already applies on cross-border RSAs and cross-border CDR2s; lead AMC cannot be modified outside AIRAC.

There is a need to improve capacity through more and better Flexible Use of Airspace.

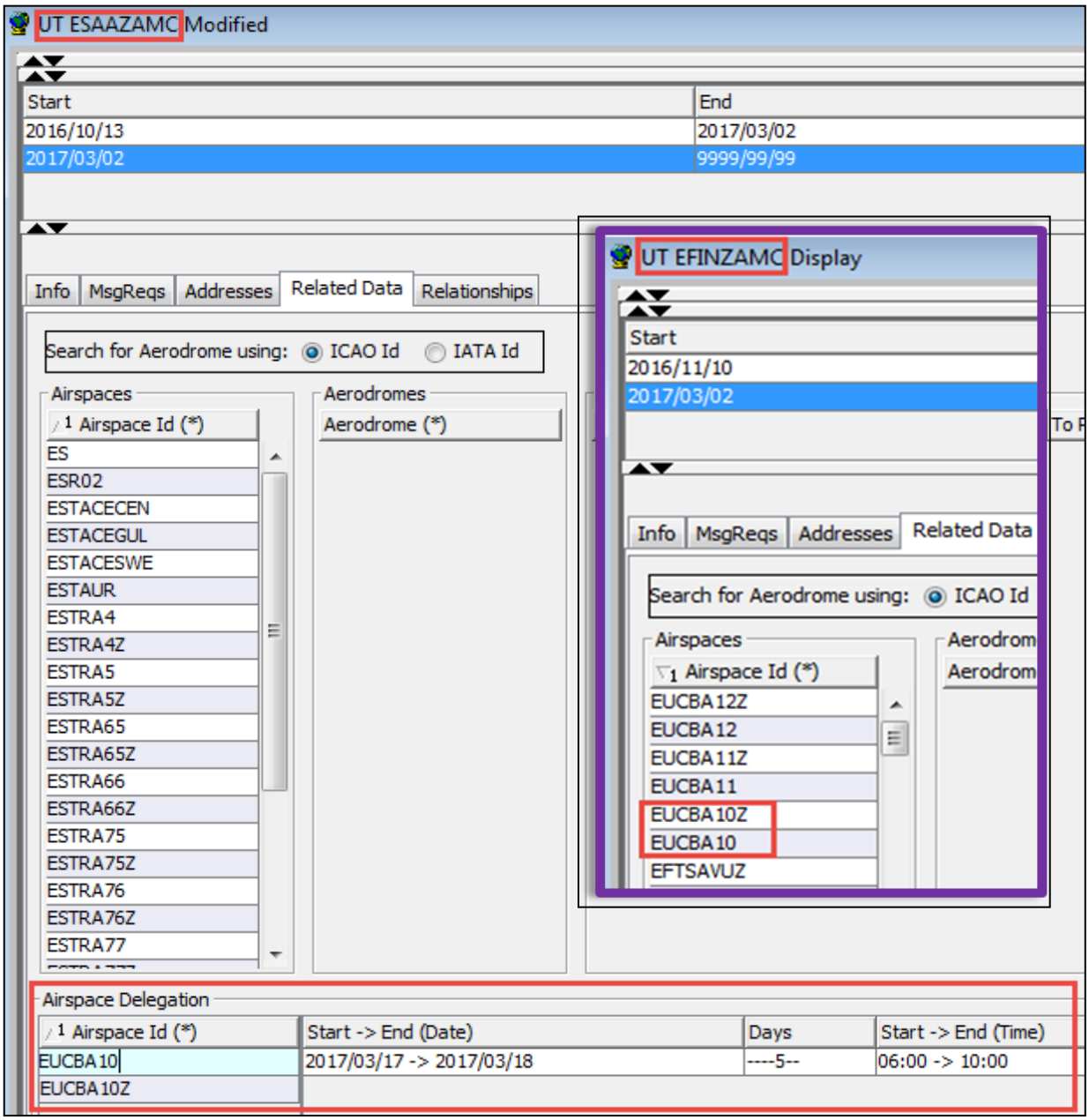
There is a need to improve safety through better publication of Airspace usage.

➔ Need to promote and facilitate the establishment and usage of Cross Border Areas amongst different States to allow bigger flexibility and to facilitate transparent publication in AUP/UUP.

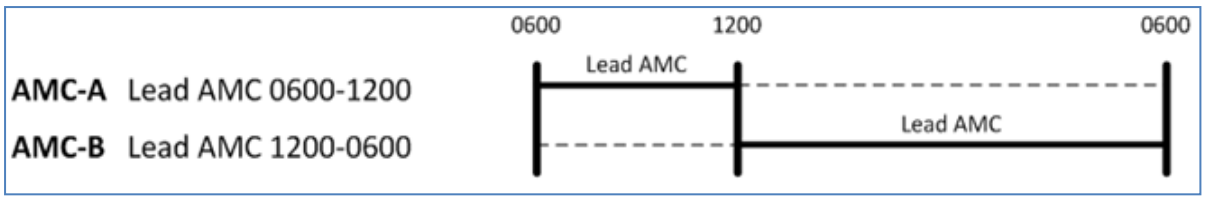


Solution

Creation of an Airspace delegation time applicability table in Unit AMC.



- This table is live-updateable
- For a given Area, there is only 1 Lead AMC at a given moment in time:



An FBZ shall be delegated exactly as its owning Area, otherwise you get the following error:

[ERROR] 18760: Amc ESAAZAMC: FBZ EUCBA10Z does not have the same delegation applicability as the owner Rsa EUCBA10	0

- The delegation applicability must be inside the RSA availability
- No overlap between Delegation applicability of same and different AMCs
- The system guarantees that a change in Lead AMC doesn't invalidate any active AUP/UUP:
  - The Lead AMC delegation can only be changed when there is no AUP/UUP in status *Ready* (needs to demote to Draft) or Released
  - The Lead AMC delegation cannot be changed for dynamically created RSA
  - The Lead AMC delegation can be changed when an AUP exists in status *Intent or Draft* and validate any inconsistencies. This allows to prepare Draft AUP several days in advance

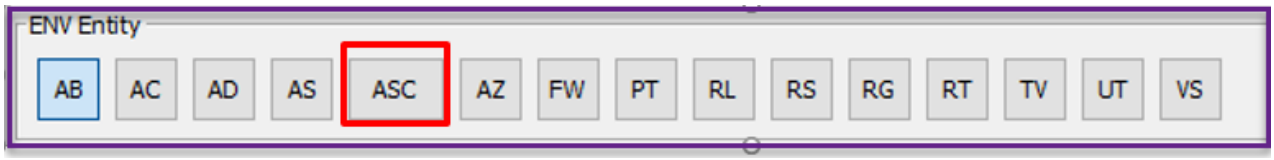
Procedure

The Lead AMC delegation of responsibility between 2 AMCs shall be done until 13.00 UTC (Win) / 12.00 UTC (Sum) for the next day from 06.00 UTC.

The involved AMCs notify CADF for implementation.

7 ASM (AirSpace Management) Scenario

- For information only -



Group a number of RSA's which are activated simultaneously

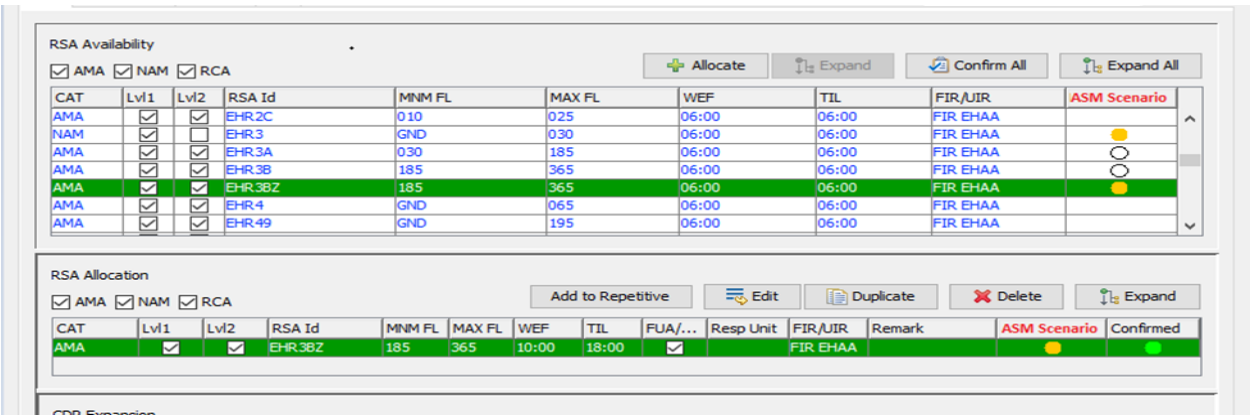
An airspace management scenario is a pre-defined and coordinated set of RSA and associated ASM measures like FBZ activations or route closures.

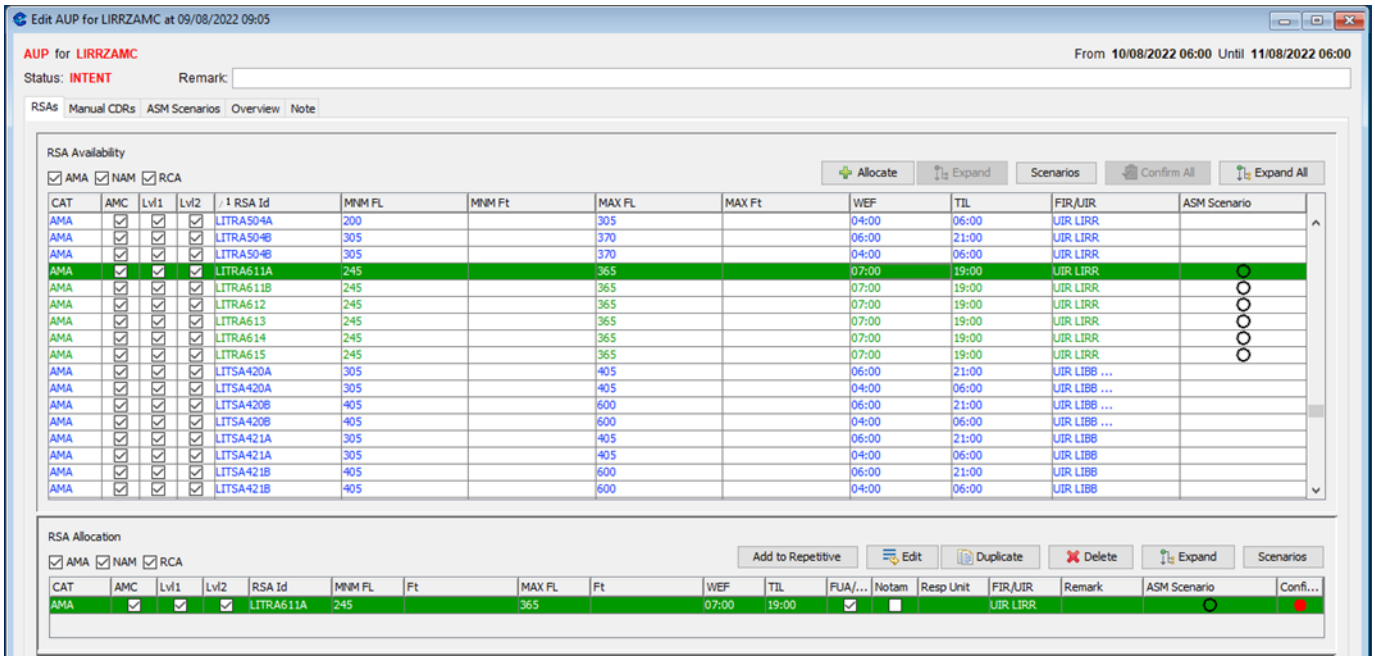
Monitored: A set of RSAs, not necessarily related to the same AMC. Monitored scenarios are designed to warn AMCs if a combination of RSA allocations could trigger capacity issues considered as critical for the network. The concerned AMC(s) will receive a warning if all the areas in a specific ASM Scenario are allocated in AUP(s)/UUP(s).

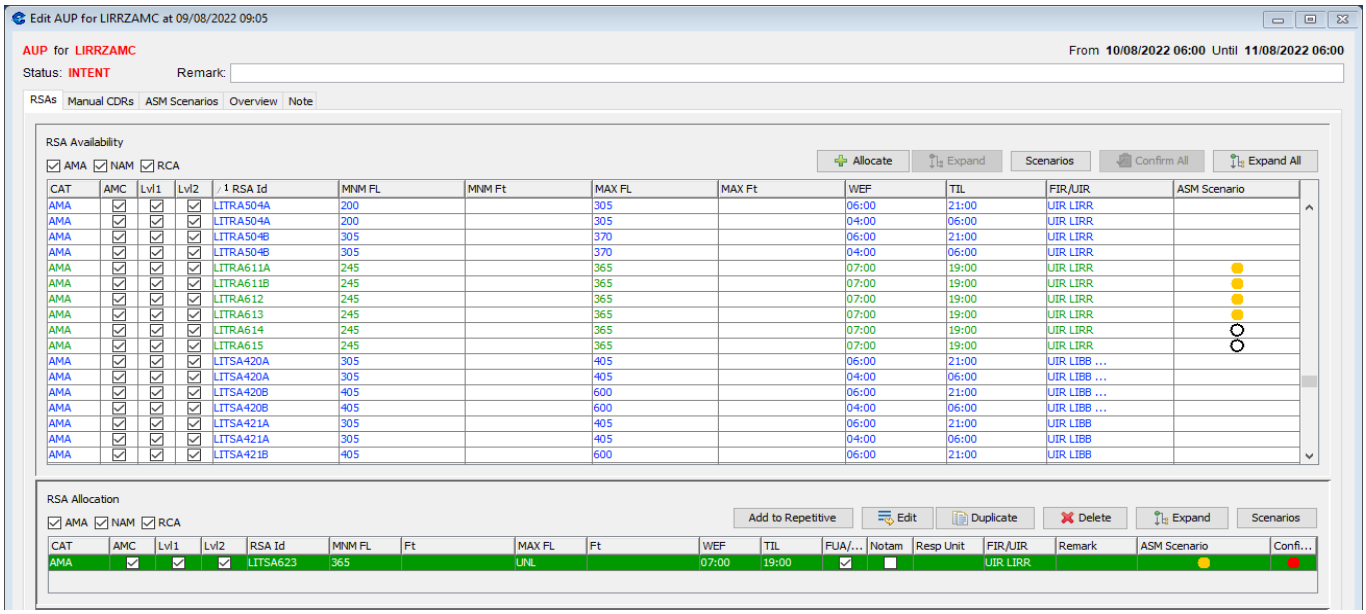
Monitored ASM Scenario flag in AUP RsaAllocation & Rsa Availability:

- no ASM scenario
- inactive ASM scenario
- active ASM scenario

The scenario flag is updated **when allocating the RSA**.




Edit AUP for LIRRZAMC at 09/08/2022 09:05
AUP for LIRRZAMC
From 10/08/2022 06:00 Until 11/08/2022 06:00
Status: INTENT
Remark:
RSAs
Manual CDRs
ASM Scenarios
Overview
Note
RSA Availability
AMA
NAM
RCA
Allocate
Expand
Scenarios
Confirm All
Expand All
CAT
AMC
Lvl1
Lvl2
RSA Id
MNM FL
MNM Ft
MAX FL
MAX Ft
WEF
TIL
FIR/UIR
ASM Scenario
RSA Allocation
Add to Repetitive
Edit
Duplicate
Delete
Expand
Scenarios
FUA/...
Notam
Resp Unit
Remark
Confi...


Edit AUP for LIRRZAMC at 09/08/2022 09:05
AUP for LIRRZAMC
From 10/08/2022 06:00 Until 11/08/2022 06:00
Status: INTENT
Remark:
RSAs
Manual CDRs
ASM Scenarios
Overview
Note
RSA Availability
AMA
NAM
RCA
Allocate
Expand
Scenarios
Confirm All
Expand All
CAT
AMC
Lvl1
Lvl2
RSA Id
MNM FL
MNM Ft
MAX FL
MAX Ft
WEF
TIL
FIR/UIR
ASM Scenario
RSA Allocation
Add to Repetitive
Edit
Duplicate
Delete
Expand
Scenarios
FUA/...
Notam
Resp Unit
Remark
Confi...

Managed: **A predefined set of RSAs that can be allocated by AUP/UUP as a set. These RSAs must belong to, or be delegated to, the same AMC. Cross-border ASM Scenarios are currently forbidden. Managed ASM Scenarios can have associated Restriction Groups (not implemented yet).**

Managed ASM Scenarios can be allocated by AUP/UUP but the allocation of their constituent RSAs cannot be individually modified in a later UUP.

Overview Scenario State values and symbols:

	None (= *blank field*)	
○	**Inactive**	**(Monitored or Managed)**
🟡	**Active**	**(Monitored)**
🔴	**ActivatedNotConfirmed**	**(Managed)**
🟢	**ActivatedConfirmed**	**(Managed)**

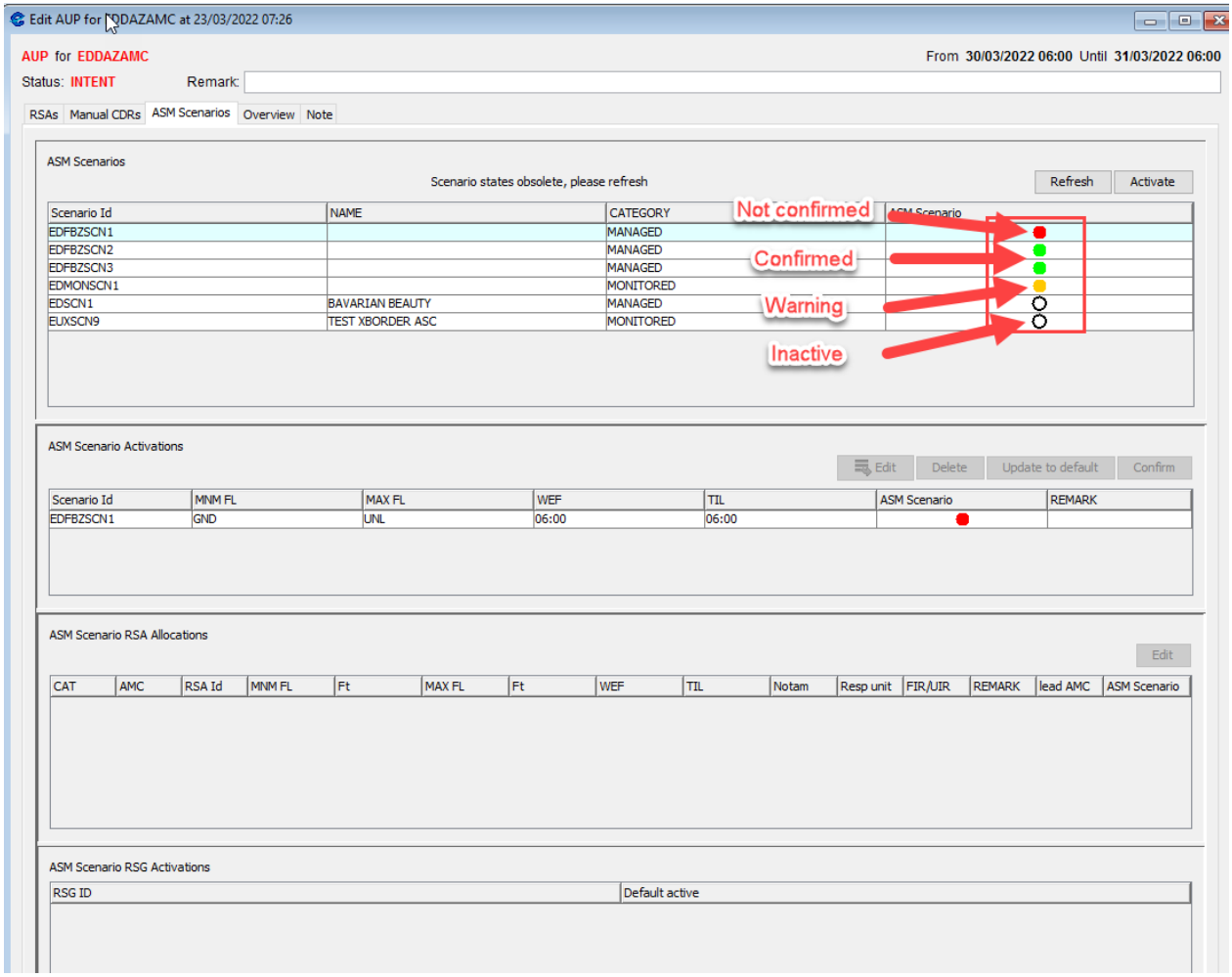
None: no ASM Scenario or ASM Scenario in undefined state

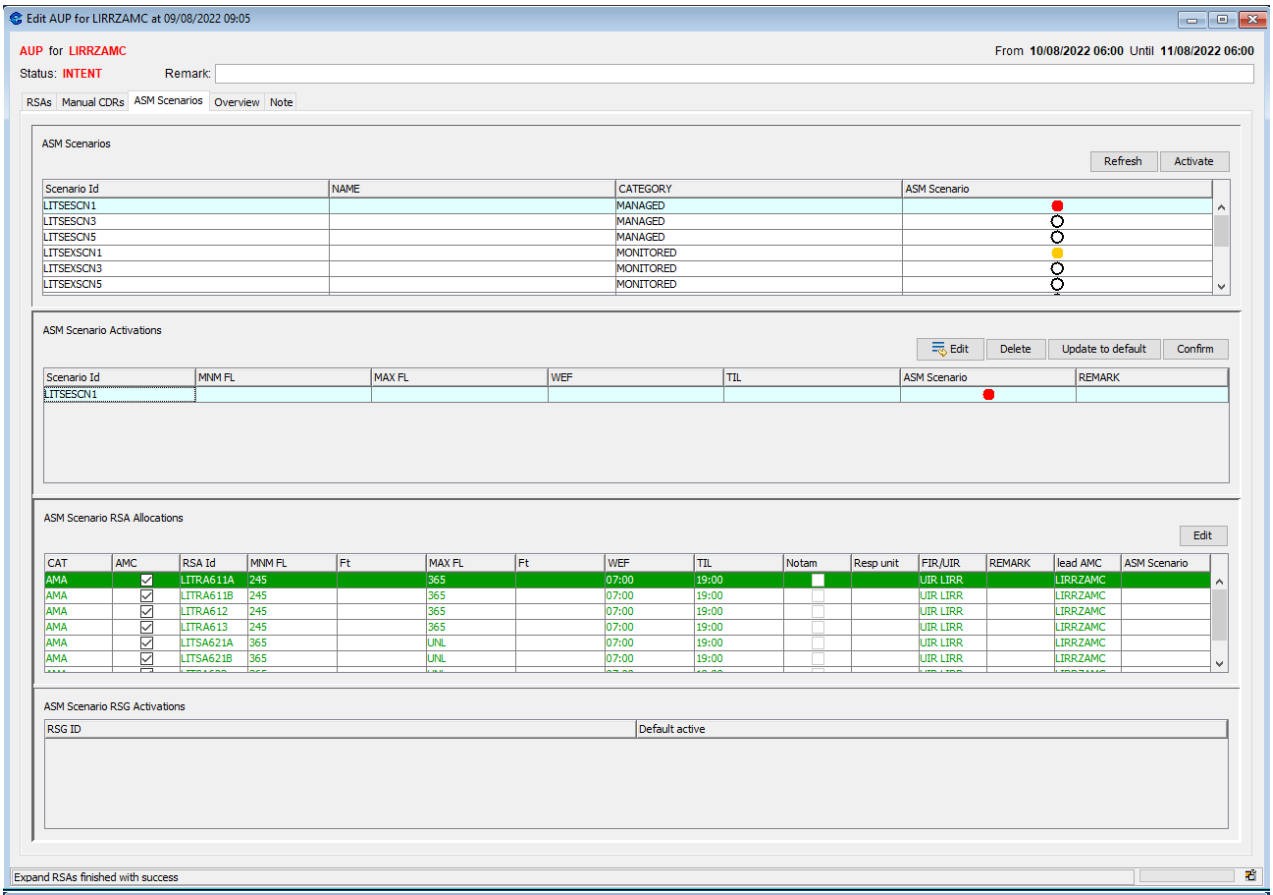
Inactive: ASM Scenario exists but is not active

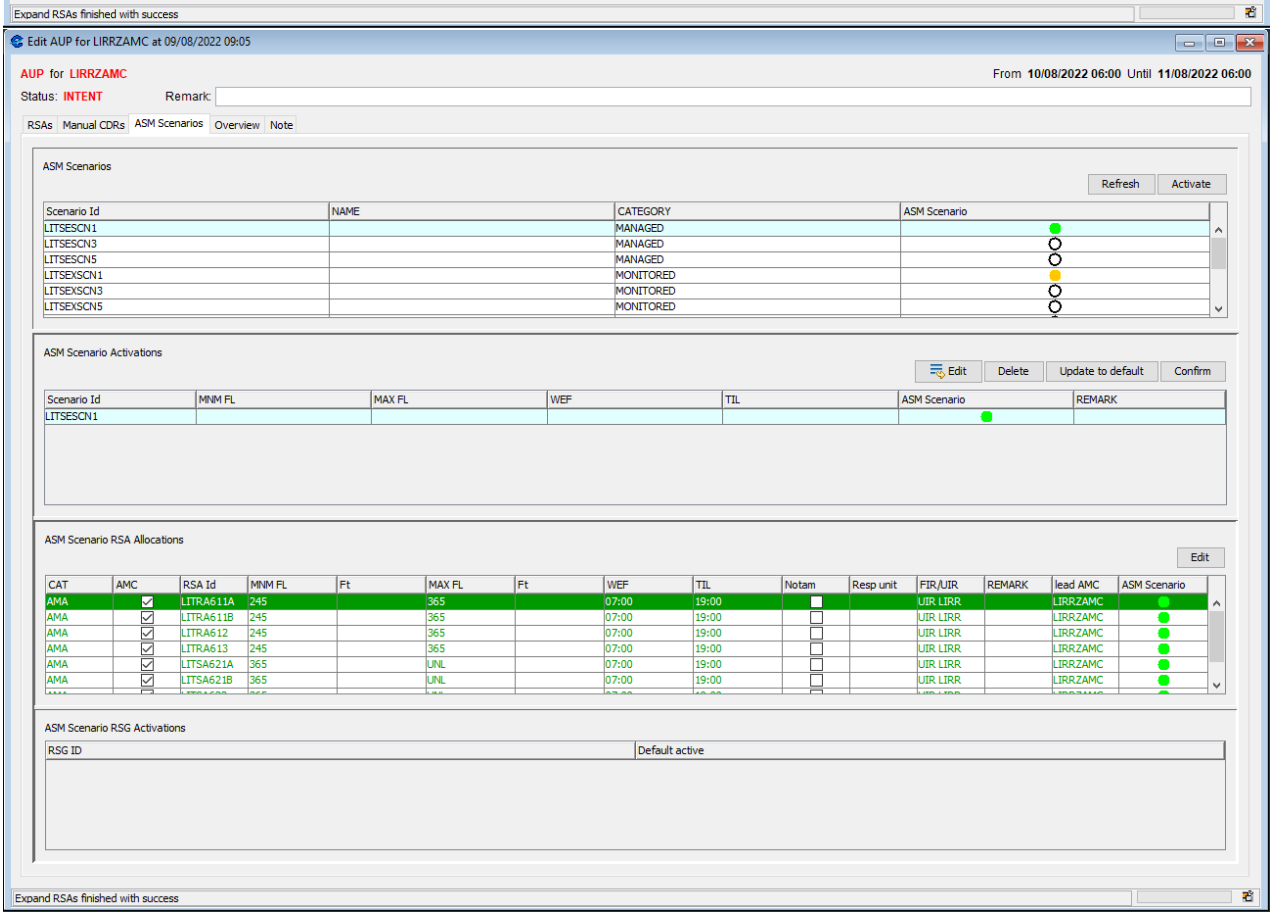
Active: 'Monitored' ASM Scenario is active (as detected by the system monitoring)

ActivatedNotConfirmed: 'Managed' ASM Scenario is activated but not yet confirmed

ActivatedConfirmed: 'Managed' ASM Scenario is activated and confirmed


Edit AUP for EDDAZAMC at 23/03/2022 07:26
AUP for EDDAZAMC
From 30/03/2022 06:00 Until 31/03/2022 06:00
Status: INTENT
Remark:
RSAs
Manual CDRs
ASM Scenarios
Overview
Note
ASM Scenarios
Scenario states obsolete, please refresh
Refresh
Activate
Scenario Id
NAME
CATEGORY
ASM Scenario
EDFBZSCN1
MANAGED
EDFBZSCN2
MANAGED
EDFBZSCN3
MANAGED
EDMONSCN1
MONITORED
EDSCN1
BAVARIAN BEAUTY
MANAGED
EUXSCN9
TEST XBORDER ASC
MONITORED
Not confirmed
Confirmed
Warning
Inactive
ASM Scenario Activations
Edit
Delete
Update to default
Confirm
Scenario Id
MNM FL
MAX FL
WEF
TIL
ASM Scenario
REMARK
EDFBZSCN1
GND
UNL
06:00
06:00
ASM Scenario RSA Allocations
Edit
CAT
AMC
RSA Id
MNM FL
Ft
MAX FL
Ft
WEF
TIL
Notam
Resp unit
FIR/UIR
REMARK
lead AMC
ASM Scenario
ASM Scenario RSG Activations
RSG ID
Default active


Edit AUP for LIRRZAMC at 09/08/2022 09:05
AUP for LIRRZAMC
From 10/08/2022 06:00 Until 11/08/2022 06:00
Status: INTENT
Remark:
RSAs
Manual CDRs
ASM Scenarios
Overview
Note
ASM Scenarios
Refresh
Activate
Scenario Id | NAME | CATEGORY | ASM Scenario
LITSESCN1 | MANAGED
LITSESCN3 | MANAGED
LITSESCN5 | MANAGED
LITSEXSCN1 | MONITORED
LITSEXSCN3 | MONITORED
LITSEXSCN5 | MONITORED
ASM Scenario Activations
Edit
Delete
Update to default
Confirm
Scenario Id | MNM FL | MAX FL | WEF | TIL | ASM Scenario | REMARK
LITSESCN1
ASM Scenario RSA Allocations
Edit
CAT | AMC | RSA Id | MNM FL | Ft | MAX FL | Ft | WEF | TIL | Notam | Resp unit | FIR/UIR | REMARK | lead AMC | ASM Scenario
AMA | LITRA611A | 245 | 365 | 07:00 | 19:00 | UIR LIRR | LIRRZAMC
AMA | LITRA611B | 245 | 365 | 07:00 | 19:00 | UIR LIRR | LIRRZAMC
AMA | LITRA612 | 245 | 365 | 07:00 | 19:00 | UIR LIRR | LIRRZAMC
AMA | LITRA613 | 245 | 365 | 07:00 | 19:00 | UIR LIRR | LIRRZAMC
AMA | LITSA621A | 365 | UNL | 07:00 | 19:00 | UIR LIRR | LIRRZAMC
AMA | LITSA621B | 365 | UNL | 07:00 | 19:00 | UIR LIRR | LIRRZAMC
ASM Scenario RSG Activations
RSG ID | Default active
Expand RSAs finished with success


Edit AUP for LIRRZAMC at 09/08/2022 09:05
AUP for LIRRZAMC
From 10/08/2022 06:00 Until 11/08/2022 06:00
Status: INTENT
Remark:
RSAs
Manual CDRs
ASM Scenarios
Overview
Note
ASM Scenarios
Refresh
Activate
Scenario Id | NAME | CATEGORY | ASM Scenario
LITSESCN1 | MANAGED
LITSESCN3 | MANAGED
LITSESCN5 | MANAGED
LITSEXSCN1 | MONITORED
LITSEXSCN3 | MONITORED
LITSEXSCN5 | MONITORED
ASM Scenario Activations
Edit
Delete
Update to default
Confirm
Scenario Id | MNM FL | MAX FL | WEF | TIL | ASM Scenario | REMARK
LITSESCN1
ASM Scenario RSA Allocations
Edit
CAT | AMC | RSA Id | MNM FL | Ft | MAX FL | Ft | WEF | TIL | Notam | Resp unit | FIR/UIR | REMARK | lead AMC | ASM Scenario
AMA | LITRA611A | 245 | 365 | 07:00 | 19:00 | UIR LIRR | LIRRZAMC
AMA | LITRA611B | 245 | 365 | 07:00 | 19:00 | UIR LIRR | LIRRZAMC
AMA | LITRA612 | 245 | 365 | 07:00 | 19:00 | UIR LIRR | LIRRZAMC
AMA | LITRA613 | 245 | 365 | 07:00 | 19:00 | UIR LIRR | LIRRZAMC
AMA | LITSA621A | 365 | UNL | 07:00 | 19:00 | UIR LIRR | LIRRZAMC
AMA | LITSA621B | 365 | UNL | 07:00 | 19:00 | UIR LIRR | LIRRZAMC
ASM Scenario RSG Activations
RSG ID | Default active
Expand RSAs finished with success

Harmonised ASM scenario identification

In order to ensure a harmonised identification of ASM scenarios across Europe, the following principles apply.

National ASM scenario identification

a) A group of two letters, representing the ICAO Country Code of the State; followed by
b) A group of two letters, representing the ICAO Country Code of the State; followed by
c) A group of two letters, representing the ICAO Country Code of the State; followed by
d) "RG" and 1 digit (1 to 9) for the associated Restriction Group — RG#, if any.

The following are fictitious examples:

E.g. 1:

L	I	S	A	R	D	S	C	N	1	2	R	G	1		

E.g. 2:

L	S	W	E	S	T	S	C	N	3	R	G	1			

Cross-Border ASM scenario identification (not implemented yet)

a) ICAO Country Codes of the involved States (up to 4 States); followed by
b) "SCN" and max 2 digits (1 to 99) for the scenario numbering — SCN##; potentially followed by
c) "RG" and 1 digit (1 to 9) for the associated Restriction Group — RG#, if any.

E.g. :

L	I	L	F	L	S	L	O	S	C	N	1	R	G	1	

In a later phase: to be used to evaluate the impact of scenario assessments

8 AMC/CADF Addressees

8.1 Scope

The list of AMC/CADF addresses that was initially published as a Supplement to the ASM Handbook is now published as separate data sheet (per AMC).

The list includes any general information necessary to conduct Airspace Management (ASM) coordination at Level 2 between national AMCs and the CADF.

Revised information on AMC addresses received from the States will be directly updated in the sheets available in the “One sky teams”.

INTENTIONALLY BLANK PAGE

9 Training material

An e-learning program relevant for AMC staff has been developed by EUROCONTROL. This program named 'AMC Refresher Training' is available on the Eurocontrol Training Zone.

The registration procedure for this program is explained on the NM website:

www.eurocontrol.int/training > Courses and Training > AMC Refresher Training

The AMC Refresher Training program contains in particular a CIAM course with training material for CIAM users in the form of work-based examples presented in short animated modules.

INTENTIONALLY BLANK PAGE

Annex 1 - FUA Temporary Instruction (FTI) Template

FUA OPERATIONS	FUA TEMPORARY INSTRUCTION	Doc. ID: FTI/ YY-nnn	
Issued on: DD/MM/YYYY By : xxx	Subject	Validity From : dd/mm/yyyy To:	NOP Portal: Yes/No Briefing: Yes/No

EXAMPLE FORMAT

Actions

In the event that an FTI is needed, the following steps shall be followed:

1. ASMSG, ODSG, or another group agrees on a change or on trial in regards to the ASM or an AMC approaches CADF with a request for temporary procedures, e.g. during a large-scale exercise.
2. NM ensures that the local AMCs (and when necessary, FMPs) are aware of, and in agreement with, the change or trial.
3. An FTI is drafted by NOM/OTR and/or the AMC concerned.
   The draft FTI is reviewed and agreed by the AMC(s) concerned, OPL/ASM_ AD SNOS and ASMSG group If FTI is affecting all AMCs.
   If only one or a few AMC(s) are affected, then the approval process is reviewed by OPL/ASM_/AD SNOS and impacted AMC(s).
   In all cases, ASMSG is in the loop.
4. The FTI is published provided that the NM safety assessment is positive. In some cases, a safety statement may be needed, and the OPL/ASM will be involved.
5. In case of the safety assessment outcome is classified as Types “A” and “B”, EASA approval is required before introducing a change or run a live trial.
6. The FTI shall have a clear scope and time period of application.
7. The FTI will go to NM Instruction Team for NM Internal and Final review, numbering and internal NM publication and to the AMC(s) concerned for national publication. In case of additional instructions are required for NMOC staff, an operational Instruction (OI) is required; a dedicated safety assessment shall be performed.
8. The FTIs are published on the “OneSky Teams” ASM-SG/Shared Documents/CADF-AMC Operational Documents, and in a binder at the CADF position and in the local AMC Ops Manual.

TLP status (NM only)

The traffic light protocol (TLP) status must be indicated by the author. The default is set to white as it is shared information externally. Red, amber and green should not normally be used.

The use of the codes is explained as:

	RED	Highly sensitive, non-disclosable information.
	AMBER	Sensitive information with limited disclosure.
	GREEN	Normal business information.
	WHITE	Public information.

For the AMCs, different national document classifications may apply and will be added to each individual FTI.

Annex 2 - Appendix D of the 'AMC Coordination Letter of Agreement'

Appendix D

Procedures for the Coordination of Cross-Border Areas and/or Conditions Route Availability Prior to AUP Publication

List of routes/Airspaces published on the "One sky teams" as separated document. Will be reviewed at ASMSG meeting.

This will allow us to update the lead AMC data, whenever required.

INTENTIONALLY BLANK PAGE

Annex 3 - Data submission form for ASM related data

DATA SUBMISSION FORM FOR ASM RELATED DATA			
Addressees: EUROCONTROL - NM **to: NM/AD_Team** nm.ad.spvr@eurocontrol.int			
Originator:	EG		
Date of Submission:	15/06/2016		
Changes are effective:	**From**: 18/08/2020	**Till:**	INDEFINITE
Levels/time of CDR category: **New:** **Change:** X **Delete:** **Route ID**: UL10 **Route Portion**: DVR-RINTI **CDR category**: 3 **From:** **Till:**			
Levels/time of RSA's: **New:** **Change:** X **Delete:** **RSA ID**: EGD202 **Min FL**: GND **Max FL**: 335 **From:** **Till:**			

Lead AMC: EGTTZAMC **Delegated AMC**: LFFAZAMC

New: **Change:** **Delete:** X

Route ID : UL10

Route Portion (From PT / To PT): DVR-RINTI

RSA ID:

From:

Till:

Offload CDR(s): **New:** **Change:** X **Delete:**

Route ID : UN18

RSA ID: EGD064A

Route Portion (From PT / To PT): PEMOB-LND

Low FL: 205

Upp FL: 430

From:

Till:

Nearby CDR(s) / route (s): **New:** **Change:** **Delete:** X

Route ID : UN97

RSA ID: EGD323A

Route Portion (From PT / To PT): NEPSO-ROKAN

Low FL: 245

Upp FL: 460

Till:

From:

Excluded CDR(s): **New:** X **Change:** **Delete:**

Route ID : UN14

RSA ID: EGD202

Route Portion (From PT / To PT): MEDOG-PEMOB

From 15/11/2016

Till: UFN

AMA: (If not published in AIP) **New:** **Change: x**

RSA ID: EGD201

CBA ID: EUCBA60

New AUP Category: AMA

Coordinates and map attached on separate sheet: ☒

Coordinates: New coordinates

CBA composition: LICBA60 / LSCBA60

From

Till:

NAM: (If not published in AIP) **New:** **Change:**

RSA ID:

CBA ID:

New AUP Category:

Coordinates and map attached on separate sheet: ☒

Coordinates:

CBA composition:

From:

Till:

EU Restriction: (Temporary restrictions)

New: X Change: Delete:

RSA ID: EGP720

Restriction: EUSPACE

FUA (Y/N): Y

Operational goal: Traffic is not allowed to flight plan across area when spaceplane testing is underway

Affected routes/DCT'(s)/Airspaces:

From: 01/06/2017

Till:

FUA Restriction: (Permanent restrictions)

New: Change: x Delete:

RSA ID: EGDJ1

Restriction: EGDJ1R

Operational goal: Traffic is not allowed to flight plan across active military area

Affected routes/DCT'(s)/Airspaces: EGPXALL

Requested Change: Change applicability period to 0800:19:00 (0700-18:00)

From:

Till:

Abbreviations

Abbreviations and acronyms used in this document are available in the EUROCONTROL Air Navigation Inter-site Acronym List (AIRIAL) which may be found online:

http://www.eurocontrol.int/airial/definitionListInit.do?skipLogon=true&glossaryUid=AIRIAL.

Additionally, for ease of use listed below are those technical and non-technical acronyms, abbreviations, or mixture of these two which:

1. are not too specific to a specific domain or section in the NM;
2. are used in documents sent across NM sections or externally, or during meetings with people coming from different sections or from outside NM.

ACRONYM	DEFINITION
ACC	Area Control Centre
AD	Airspace Data Operations
AFTN	Aeronautical Fixed Telecommunication Network
AIM	ATFM Information Message
AIP	Aeronautical Information Publication
AMA	AMC Manageable Area
AMC	Airspace Management Cell
ANT	Airspace Navigation Team
AO	Aircraft Operator
ASM	Airspace Management
ASM-SG	Airspace Management Sub-Group
ATC	Air Traffic Control
ATCC	Air Traffic Control Centre
ATFM	Air Traffic Flow Management
ATFCM	Air Traffic Flow and Capacity Management
ATM	Air Traffic Management
ATS	Air Traffic Services
AUP	Airspace Use Plan
B2B	Business to Business
CACD	Central Airspace and Capacity Database
CADF	ECAC Centralised Airspace Data Function
CBA	Cross-Border Area
CDR	Conditional Route
CIAM	Collaborative Interface for Airspace Management
CRSA	Composed RSA (Restricted Airspace)

ACRONYM	DEFINITION
D	Danger area
eAMI	electronic Airspace Management Information
ECAC	European Civil Aviation Conference
EAUP	European Airspace Use Plan
ENV	Environment database
ERSA	Elementary RSA (Restricted Airspace)
EUROCONTROL	European Organisation for the Safety of Air Navigation
EUUP	European Updated Airspace Use Plan
FBZ	Flight Buffer Zone
FIR	Flight Information Region
FL	Flight Level
FMP	Flow Management Position
FTI	FUA Temporary Instructions
FUA	Flexible Use of Airspace
FUSG	Flexible Use of Airspace Sub-Group
IFPS	Integrated Initial Flight Plan Processing System
LoA	Letter of Agreement
MRA	Military Reserved Area
MTA	Military Training Area
NAM	Non AMC Manageable Area
NEC	National Environment Coordinator
NM	Network Manager
NMOC	Network Management Operations Centre
NOP	Network Operations Plan
OTR	Operations Transformation
P	Prohibited area
R	Restricted area
RCA	Restricted Coordination Area
RL	Reference Location
RS	Restriction
RSA	Restricted Airspace
SUP	Operations Support
TRA	Temporary Reserved Area
TSA	Temporary Segregated Area
UFN	Until Further Notice
UTC	Coordinated Universal Time
UUP	Updated Airspace Use Plan

EUROCONTROL

SUPPORTING EUROPEAN AVIATION

© EUROCONTROL - 2022

This document is published by EUROCONTROL for information purposes. It may be copied in whole or in part, provided that EUROCONTROL is mentioned as the source and it is not used for commercial purposes (i.e. for financial gain). The information in this document may not be modified without prior written permission from EUROCONTROL.

www.eurocontrol.int