FUA AMC CADF OPERATIONS MANUAL

Network Operations

Edition 21.0
Edition date: 10-11-2025
Classification: WHITE
Reference nr:

DOCUMENT CONTROL

Document Title	FUA AMC CADF OPERATIONS MANUAL
Document Subtitle	Network Operations
Document Reference	
Edition Number	21.0
Edition Validity Date	10-11-2025
Classification	WHITE
Status	Released issue
Author(s)	Bogdan TOMESCU, NMD/NOM/OTR/AD Domain
Document Owner	Hans DE SMET, NMD/NOM/OTR/AD Domain

APPROVAL TABLE

Authority	Date	Signature
Prepared by: Bogdan TOMESCU, NMD/NOM/OTR	26-10-2025	Email
Reviewed and endorsed by: Hans DE SMET, NMD/NOM/OTR	12-11-2025	Email
Approved by: Chris PEREGRINE, Head of NMD/NOM/OTR	12-11-2025	Email

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
18.0	10/12/2023	KPY/ANEMEC	General review & update
19.0	06/09/2024	ANEMEC/BTOMESCU	Review of Simultaneous UUPs procedure Clarification regarding the explicit allocation of NAMs
20.0	16/12/2024	ANEMEC/BTOMESCU	Minor correction to the Simultaneous UUPs procedure Deletion of the Common Procedure Covering Large Holiday Periods Clarification regarding the usage of ERSA in the Modularity concept

			Introduction of cutting rules for RSA Identifiers Clarification regarding the explicit allocation of NAMs Correction to the harmonised ASM scenario identification convention
21.0	10/11/2025	Bogdan TOMESCU Dijana TRENEVSKA	Updated definition of FBZ Reference to ERNIP Part 1, Chapter 9 for the naming convention of FBZs Updated FTI process Updated FTI template

EDITION CHANGE RECORD

Title	Amendment notes
1. INTRODUCTION	
2. PROPOSED AMC WORKING PROCEDURES	2.1.2.3 Simultaneous UUPs – minor correction
3. CADF WORKING PROCEDURES	
4. FUA-RELATED CACD DATA	4.3.1 Data Sources – updated definition of FBZ 4.3.2 Naming Conventions and Identifications – reference to ERNIP Part 1 – Chapter 9
5. FUA TEMPORARY INSTRUCTIONS (FTI)	5.4 FTI Process – updated
6. LEAD AMC CONCEPT	
7. Airspace Scenario	
8. AMC/CADF ADDRESSES	
9. TRAINING MATERIAL	
ANNEX 1 - FTI TEMPLATE	Updated template
ANNEX 2 - Data submission form for ASM related data	
ANNEX 3 - AMC/CADF contingency procedures	
10. ABBREVIATIONS	

TABLE OF CONTENT

1 INTRODUCTION 6
1.1 Purpose 6
1.2 Scope 6
2 PROPOSED AMC WORKING PROCEDURES 7
2.1 Working Procedure of the AMC 7
2.1.1 AUP Procedure 7
2.1.2 UUP Procedure 8
2.2 AUP/UUP warnings 15
2.3 Temporary airspaces relevant for FPL validation 16
2.3.1 Coordination process 17
3 CADF WORKING PROCEDURES 18
3.1 Scope of the CADF 18
3.2 Working Procedure of CADF 18
3.2.1 Main CADF tasks 18
3.2.2 AUP Procedure 18
3.2.3 UUP Procedure 18
3.3 Technical Problems/Contingency 21
4 FUA-RELATED CACD DATA 22
4.1 Restricted Airspaces (RSA) 22
4.1.1 Data Sources 22
4.1.2 RSA Types and Identification 22
4.1.3 AUP Categories 24
4.1.4 FUA Parameters (Flexible Use, Level 1, Level 2, Level 3) 29
4.1.5 CDR Info (Nearby, Excluded CDRs, Related routes) 31
4.1.6 CDR Expansion 32
4.1.7 Availability 32
4.1.8 Activation 33
4.1.9 Airspace vertical limits 33
4.1.10 AMC-RSA Relationship 35
4.1.11 FMP-RSA Relationship 35
4.2 Air Routes 36
4.2.1 Data Sources 36
4.2.2 CACD Air Route Datasheet 36
4.3 FPL Buffer Zone (FBZ) 37
4.3.1 Data Sources 37
4.3.2 Naming Conventions and Identifications 37
4.3.3 Activation 37
4.3.4 Allocation 37
4.4 Non-standard Planning Zone (NPZ) 38
4.5 FUA, FUA-RAD and AUP-RAD Restrictions 41

4.5.1 Data Sources 41
4.5.2 FUA and FUA-RAD Restriction Types 41
4.5.3 AUP-RAD Restriction Type (Technical enabler for concept of Dynamic RAD) .. 43
4.5.4 Implementation of FUA Restrictions in CACD and usage in CIAM 44
4.5.5 Implementation of AUP-RAD Restrictions in CACD and usage in CIAM 47
4.5.6 Multiple AS/RT for Restriction Dependant Applicability 47
4.5.7 Restriction Grouping 51
4.5.8 Difference between FUA Restriction and FUA/RAD Restriction and AUP/ RAD Restriction (Dynamic RAD) 52

5 FUA TEMPORARY INSTRUCTIONS (FTI) 53
5.1 Background 53
5.2 Basic AMC/CADF Procedures 53
5.3 Temporary AMC/CADF Procedures 53
5.4 FTI Process 53
5.5 Format and Subsequent Treatment 54
5.6 Fields of Application 54
6 LEAD AMC CONCEPT 55
6.1 Scope 55
6.2 Procedure 55
6.3 Lead AMC Routes (Related Routes) 55
6.4 Promulgation and Distribution of Information on Cross-Border CDRs Availability 56
6.5 Hours of Operation of AMCs – Delegation of Lead AMC Responsibilities. 56
6.6 Additional Information 57
6.7 LEAD AMC Live Updateable 57
7 AIRSPACE SCENARIO 60
8 AMC/CADF ADDRESSEES 66
8.1 Scope 66
ANNEX 1 - FUA TEMPORARY INSTRUCTION (FTI) TEMPLATE 67
ANNEX 2 - DATA SUBMISSION FORM FOR ASM RELATED DATA (EXAMPLES) ... 68
ANNEX 3 - AMC/CADF CONTINGENCY PROCEDURES 72
ABBREVIATIONS 79

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.

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).

The AMC shall coordinate the promotion of the AUP with the relevant FMP when responsible for the direct management of the AUP-RAD.

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, relevant FMPs if responsible for the direct management of the AUP-RAD 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 its operations for the period.

Coordination process between FMP and AMC for AUP RAD restriction management

AMC should be notified by the relevant FMPs of the AUP/RAD restrictions to be included, unless local FMPs are authorised to insert directly in the DRAFT AUP.

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.

[1] Whenever AMC staff is not available (e.g. W/E, public holidays, etc.), 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)

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;
- 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	Ready before	Released before	Valid from	Valid until
AUP	D-1 15:00	D-1 16:00	D 06:00	D+1 06:00
UUP06/17	D-1 16:50	D-1 17:00	D 06:00	D+1 06:00
UUP06/18	D-1 17:50	D-1 18:00		
UUP06/19	D-1 18:50	D-1 19:00		
UUP06/20	D-1 19:50	D-1 20:00		
UUP07	D 06:50	D 07:00	D 07:00	D+1 06:00
UUP07:30	D 07:20	D 07:30	D 07:30	D+1 06:00
UUP08	D 07:50	D 08:00	D 08:00	D+1 06:00
UUP08:30	D 08:20	D 08:30	D 08:30	D+1 06:00

UUPhh	*D hh - 10'*	*D hh:00*	*D hh:00*	*D+1 06:00*
UUPhh:30	D hh + 20'	D hh:30	D hh:30	D+1 06:00
UUP20	D 19:50	D 20:00	D 20:00	D+1 06:00

Summer Timetable

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

In accordance with the changes introduced by Simultaneous UUP's, an AMC can already start the creation of a draft UUP for a given start time at any time before the time indicated in the 'ready before' column corresponding to that given start time

Example: draft UUP08 (valid from 08:00 UTC) can be created at any time before 07:50 UTC, so no need to wait for the publication time of the previous EUUP (Release UUP 07.30).

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. Therefor 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

NM Systems 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.

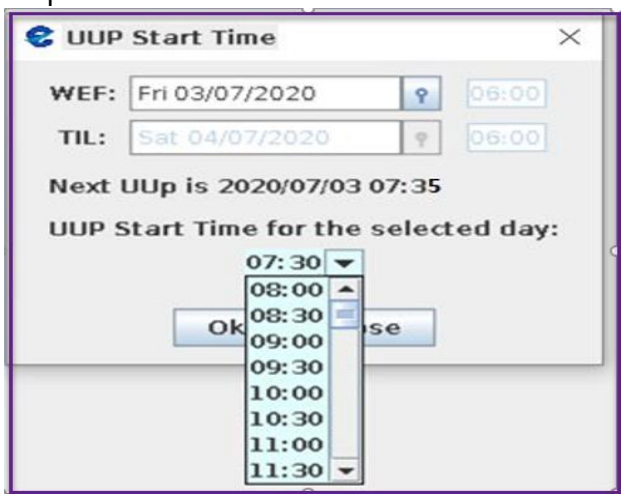
The same AMC shall be able to prepare multiple UUPs with different WEF (With Effect From) at the same time.

The system will allow multiple unpublished (not yet RELEASED) UUPs for the same AMC within the same AUP period (06:00-06:00) that have different start times. This requires that only the very last UUP can be in DRAFT status, while any preceding ones must be in READY status. Only one UUP can be in DRAFT status at a time. The principle that a DRAFT UUP must be derived from a 'stable' originating plan (READY UUP or RELEASED AUP/UUP) is maintained. Any UUP start time must be later than that of the originating plan's start time.

The system processes simultaneously UUPs with different validity times. This allows AMCs to prepare UUPs in advance.

How:

- AMC is 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



The system allows a READY UUP to be demoted (only by CADF). If this happens any UUP that has been created from that demoted UUP will have its status set to INVALID by the system. INVALID plans can never be published or have their status changed. They remain in the system so the user may consult or export their content. UUPs with

status INVALID shall be removed by either the user or CADF. Plans that have been created by B2B users are handled in the same way. A B2B request (saveAup) that is a logical replacement of an INVALID plan (i.e., same start time and AMC) will result in a new plan being created. AMCs are not allowed to demote a UUP plan (they are not authorized to downgrade the status READY through a save operation), only the CADF user can demote READY UUP plans to DRAFT so that AMCs can do further modifications.

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;
- 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;
- Additional CDR1/ATS route unavailability;
- Extension (in time and/or FL) of CDR1/ATS route unavailability;
- Additional/more restrictive restrictions (FUA / FUA restriction group / AUP/RAD).

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. real security operation2 or 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).

[2] Real security operation refers to the rapid deployment of aircraft in response to a threat or potential threat, triggered by the appropriate authorities.

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.

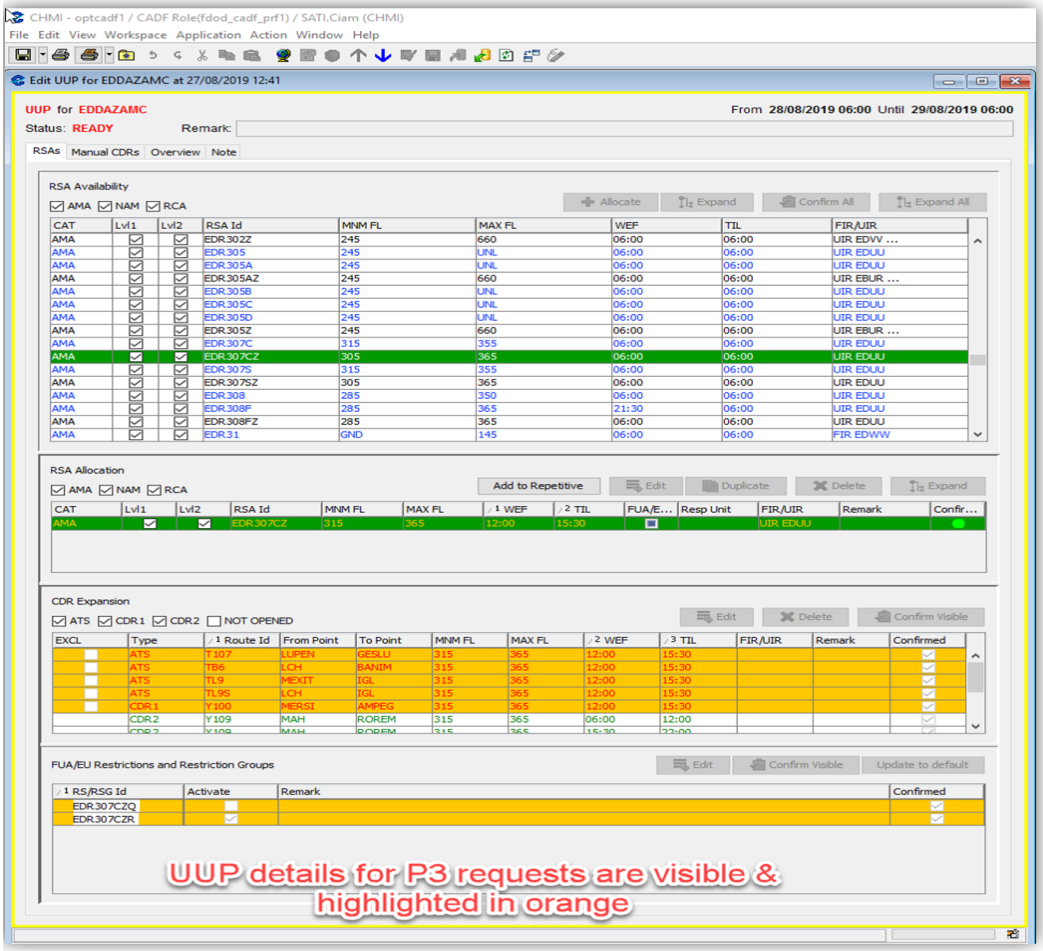
Note 3: Flight in execution phase means a flight as from 1 hour before EOBT onwards (including the airborne stage).

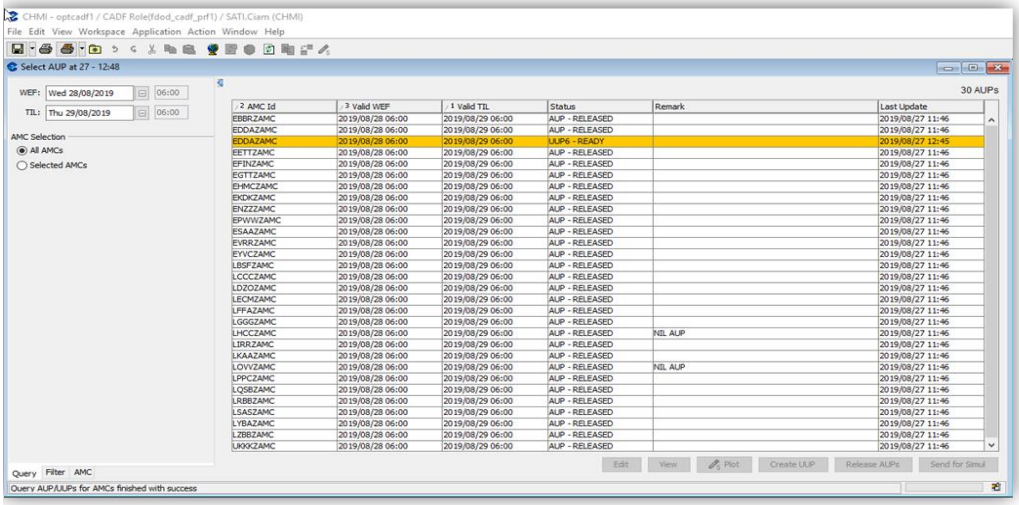
2.1.2.5 Alert for Additional route unavailability or airspace allocation (P3)

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:





2.2 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 to 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 to NOTAM publication.

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

01.00 17.00

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

01.00 18.00

- **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**

Warning: the above 2 messages indicate that the agreed 3-hour lead time for the procedure 3 application is not respected in an UUP.

Note: In case of the request does not respect the 3-hour lead time, CADF/MILO should inform AMC that the request to produce the draft UUP is rejected, unless specific contingency situation requires an exception (e.g. real security operation or correction of previous erroneous publication).

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.

2.3 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.

2.3.1 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 12.

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.

3.2.3.3 P3 with rolling UUP

Unplanned Activation of areas and/or Associated FUA/EU Restrictions

As Required on the Day of Operations

- On the Day of Operation (D), the Airspace Users that need additional airspace reservations and/or new/more constraining FUA/EU restrictions should advise the AMC on the unplanned activation of airspace and/or new/more constraining FUA/EU restrictions required (in addition to those published by AUP/UUP at D-1).

- After a preliminary coordination with FMPs concerned, AMC should inform NM (MILO) regarding the intention to activate new airspace or increase already published airspace reservations (in time and/or space) and/or new/more constraining FUA/EU restrictions via promulgation of Draft UUP using the first convenient UUP from 07.00 UTC (06.00 UTC Summer) every 30 minutes up to 17.00 UTC (16.00 UTC Summer). For the choice of the convenient UUP, it should be considered the required lead time of Three Hours (3H) before its validity. In case of the request does not respect the three hours (3H) lead time, NM (MILO) should 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). Relevant AAs, TSA/TRA users, FMPs concerned and adjacent AMCs where required, should acknowledge receipt of Draft UUP.

- Based on the Draft UUP, NM (MILO), FMPs concerned and the AMC should assess the impact of the request at local and network level (e.g. on-loading sector, sector re-configuration, etc.).

- During this phase of P3, 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:

  a) 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

b) 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 FUA/EU restrictions etc.) in such way 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;

c) if, in spite of the airspace allocation and/or FUA/EU restrictions optimisation, or due to inability to optimise the airspace allocation and/or FUA/EU 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 for those flights tactical management;

d) 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 FUA/EU 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 FUA/EU restrictions) for their considerations.
- AMCs should receive the Scenario proposed by NM (MILO) and FMPs concerned 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 (ad hoc activation of areas and closed CDRs) and/or new/more constraining FUA/EU restrictions should be implemented in the NM CACD database according to UUP information for ensuring FPL consistency.
- The CDRs unavailability and/or areas/new/more restrictive FUA/EU restrictions activations will be notified via EAUP/EUUP through:

  a) the NOP portal; and

  b) eAMI

- Dissemination of information via eAMI should be done through the posting of CDR availability or airspace status and/or new/more constraining FUA/EU 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 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: Flight in the planning phase means a flight in any stage of preparation 1 hour and more before EOBT.

  Note 2: Flight in execution phase means a flight as from 1 hour before EOBT onwards (including the airborne stage).

- During the application of these temporary instructions, the operations will be monitored. In specific, the following elements will be subject to record and further analysis:

  a) Number of P3 requests for RSAs without a strategic restriction defined

  b) Number of daily P3 requests

  c) Number of P3 requests for each UUP;

  d) Number of P3 request not properly notified by AMCs to NM

  e) Number of P3 requests not respecting 3 hours of lead time

- MILO will daily record the required information using the attached template (attachment 1) and regularly collect the template (weekly) and report to OPL/ASM team

3.3 Technical Problems/Contingency

NM agreements concerning contingency procedures should be signed between the NM and national authorities; Annex 10 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/21-002)

AMCs are responsible for informing CADF/AD SPVR of any modification that does affect the content of Annex C of the ASM-NM Agreement that CADF/AD SPVR will acknowledge in return, and if there is an AMC-AUP contingency template in Annex C, any change to it (including the ACA files if provided) by the AMC must be specified in the email and validated by CADF/AD SPVR in return.

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 and Identification

4.1.2.1 RSA Types

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

The Elementary RSAs are defined during the airspace design process, and they are serving the Modularity concept as described in the ERNIP Part 3 – ASM Handbook chapter 3.6 ASM SOLUTIONS.

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
- Non-standard Planning Zone NPZ

4.1.2.2 Identification

4.1.2.2.1 Cross Border Areas (CBAs)

A CBA must have the following principles as an Identifier in order to ensure harmonised identification of CBAs 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 sent to the NM AD Coordinator, 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"

4.1.2.2.2 RSA Identifier (ID) – Cutting Rules

The general provisions for the establishment and implementation of RSA IDs are defined in ERNIP Part 1 Chapter 9.

In order to ensure a harmonised approach, the following principles to reduce the area/FBZ ID to 9 characters should be considered:

- The following components of the identification shall remain:
  i) nationality letters/location indicator (EA)
  ii) area ID letter (P/R/D)
  iii) area ID number (first number)
  iv) FBZ/s (Z or Z1/Z2) – if applicable
  v) FUA traffic flow rule (R/S/T or R/RA/RB) – if applicable
- The cutting shall follow the following sequence:
  - Reduce "TSA/TRA" to "TR/TS" or "T" in order to free-up up to two characters
  - Cut from the area ID number the last character of the unique sequence, given that no other area ID exists in the database (e.g. LIT20 instead of LIT200)
- Consider the avoidance of multiple FBZs
- Consider the avoidance of complex FUA TFRs

Whenever a cutting rule is applied, its application should consider the need for the NM system to have always FBZs and FUA restrictions ID(s) matching the parent area ID. For example, to reduce the ID of the following EATSA200AZRA (complex FUA restriction) in EAT200AZRA, according to the cutting rule, will require as well to adapt the ID of the parent TSA in EAT200A.

After applying the cutting rules, ANSPs shall ensure that the RSA/FBZ ID is aligned in both CACD and national AIS Publication.

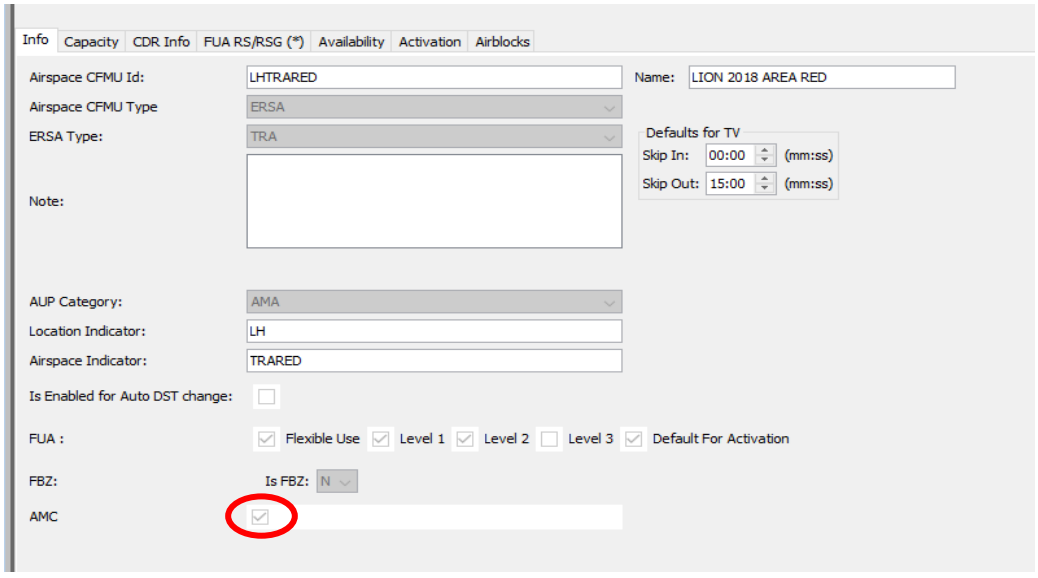
4.1.3 AUP Categories

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):

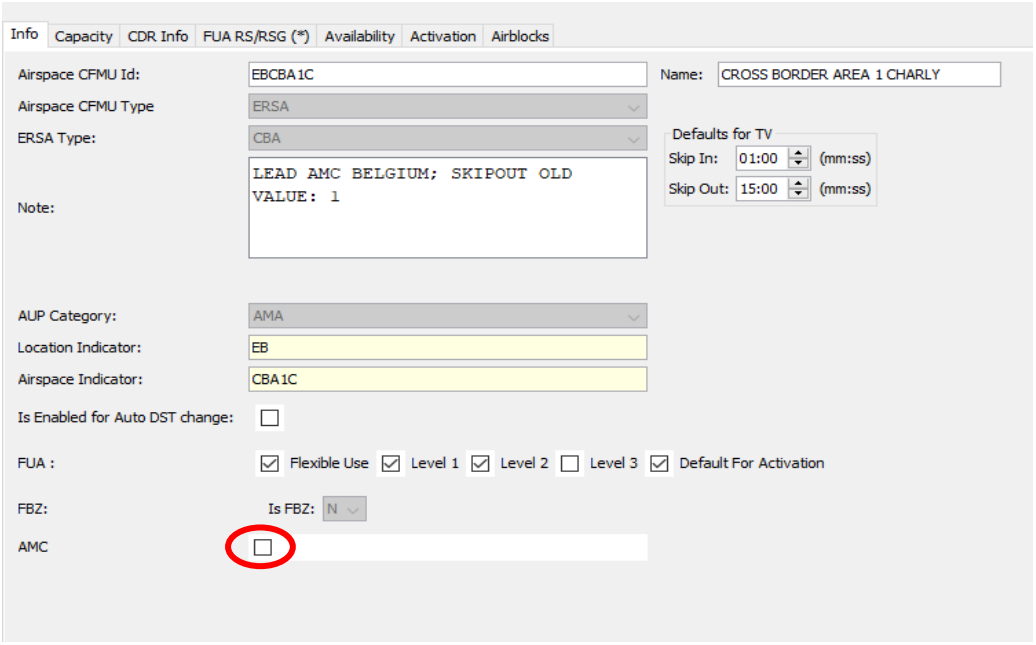
- AMA (AMC manageable): areas which can be allocated in a flexible way under the responsibility of only one AMC at each time. These RSAs can be of two categories:
  - AMA with AMC Flag on (negotiable): areas which can be allocated in a flexible way after due coordination /negotiation between AMCs and 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 advice.

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.



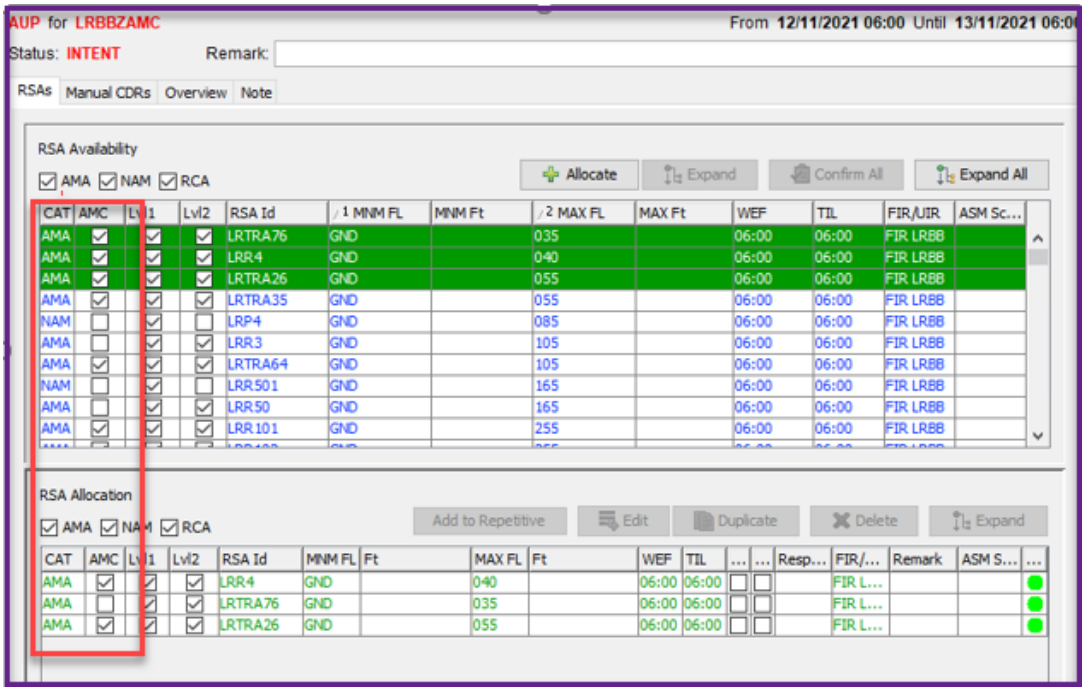
AMA with AMC capability of negotiation



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[3]
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.)

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

5.	Extend availability time	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)	CADF Staff (on request from the AMC) 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)
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.

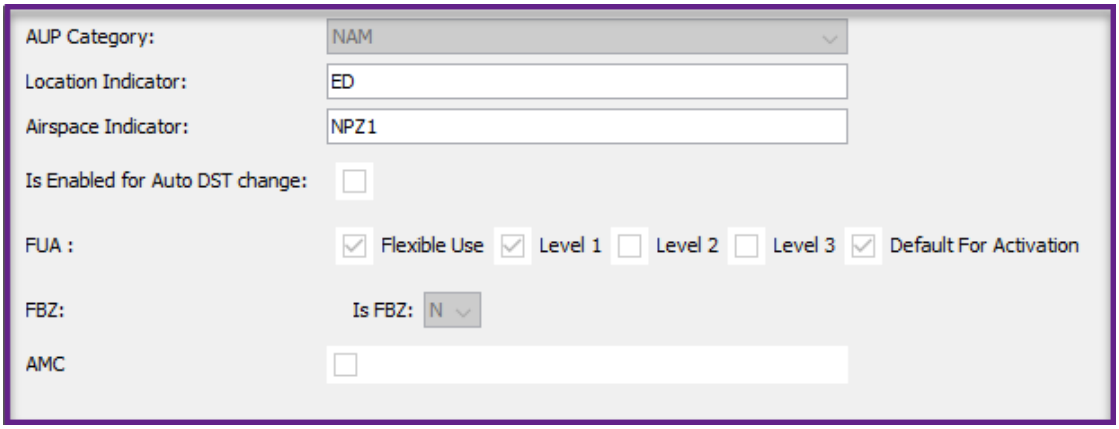
Note 2: Publication in AIP to be updated and e-mail (using Data submission form for ASM related data) to request modification in CACD (Annex 2).

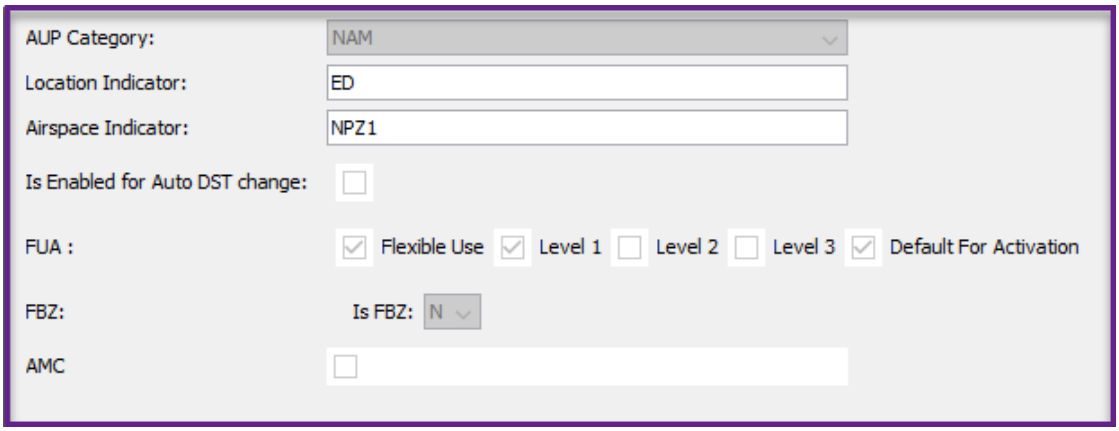
Note 3: CADF contacts: nm.ad.cadf@eurocontrol.int

Phone number: +32 27451939

(Back up NM AD Coordinator: +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 (Nearby, Excluded CDRs, Related routes)

There are 2 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.

- 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 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.

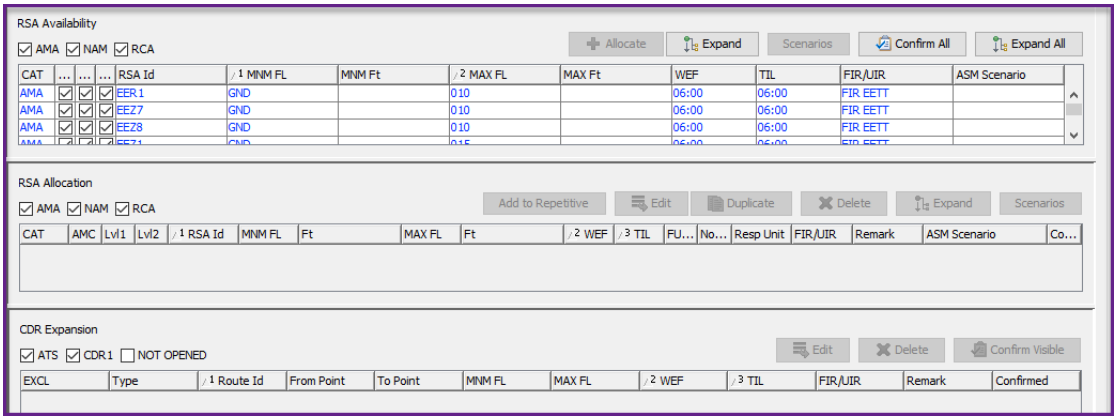
  Remark – Offload CDRs
  The offload route option becomes obsolete as all CDR2 have been removed.

  Related Routes: See 6.3 - Lead AMC.

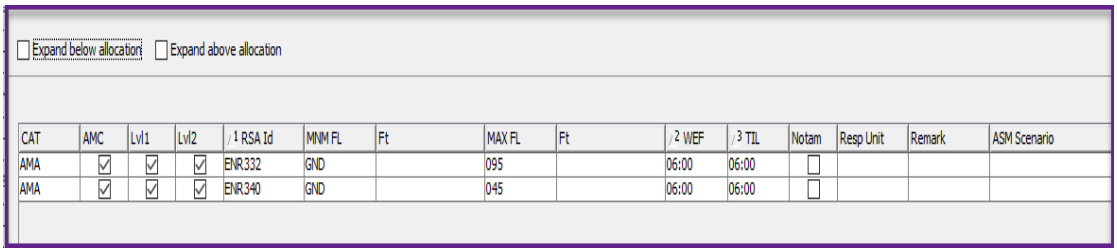
4.1.6 CDR Expansion

Considers RELATED/CROSSING routes vertical limits.

The CDR expansion should trigger CROSSING or NEARBY 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 FL Range of the RSA Allocation
- 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 FL Range of the RSA Allocation



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). It should also be noted that, if such a change is made to the allocation

of a NAM (e.g. changes to the implicit FL allocation for a limited duration), it overwrites the default allocation, based on the availability of the RSA defined in CACD, for the entire period of validity of the plan. AMCs should ensure that the changed allocation still covers the entire intended period.

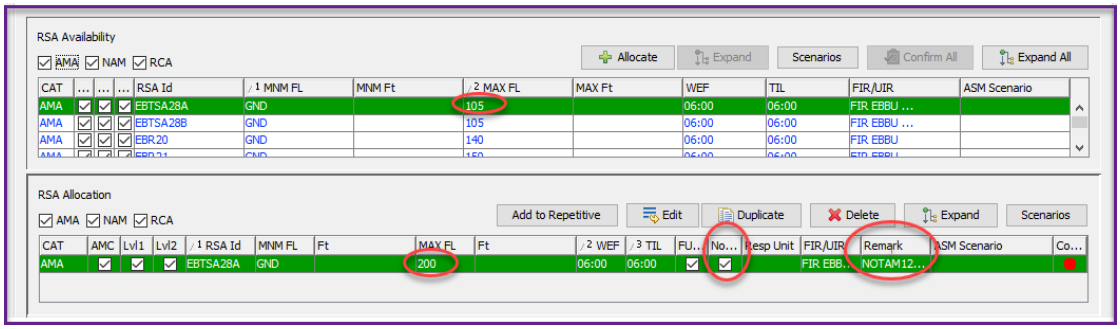
4.1.8 Activation

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 Airspace vertical limits

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.

NM CACD System

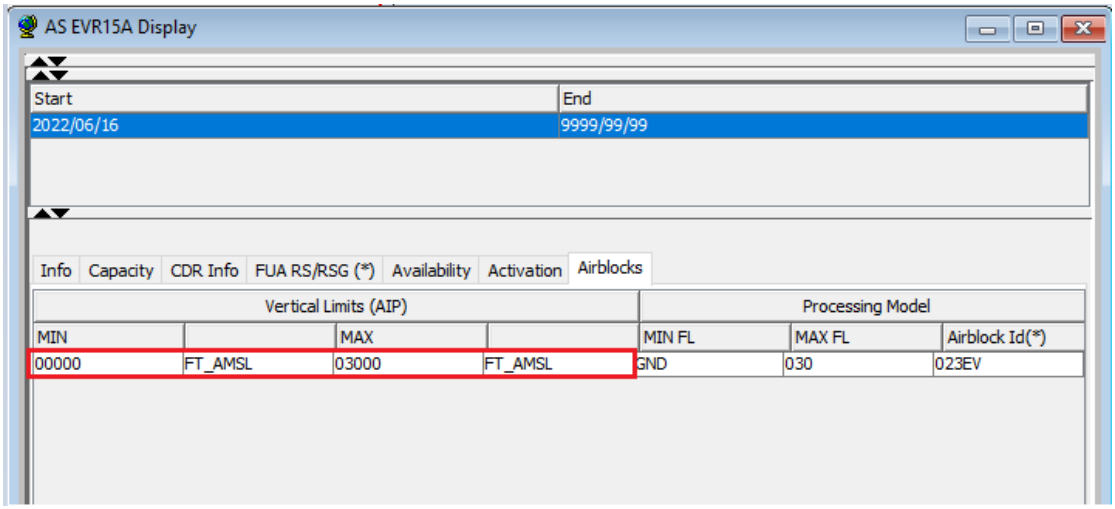
NM CACD System supports the definition of vertical limits in feet in the basic Airspace data as unit of measurement (UOM) in addition to FL.

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

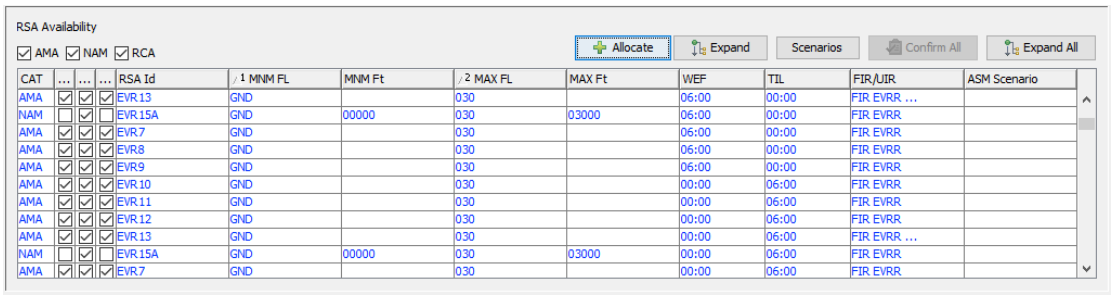
EVR15A ZALENIEKI Lateral limits are available in the AIP Data set, feature ID: b2205e33-11f-b-42c9-87fe-e03701d5776b	3000 FT MSL / GND	MON-FRI 00:00-23:59. Area designated for UAVFACTORY LTD unmanned aircraft only.



CIAM

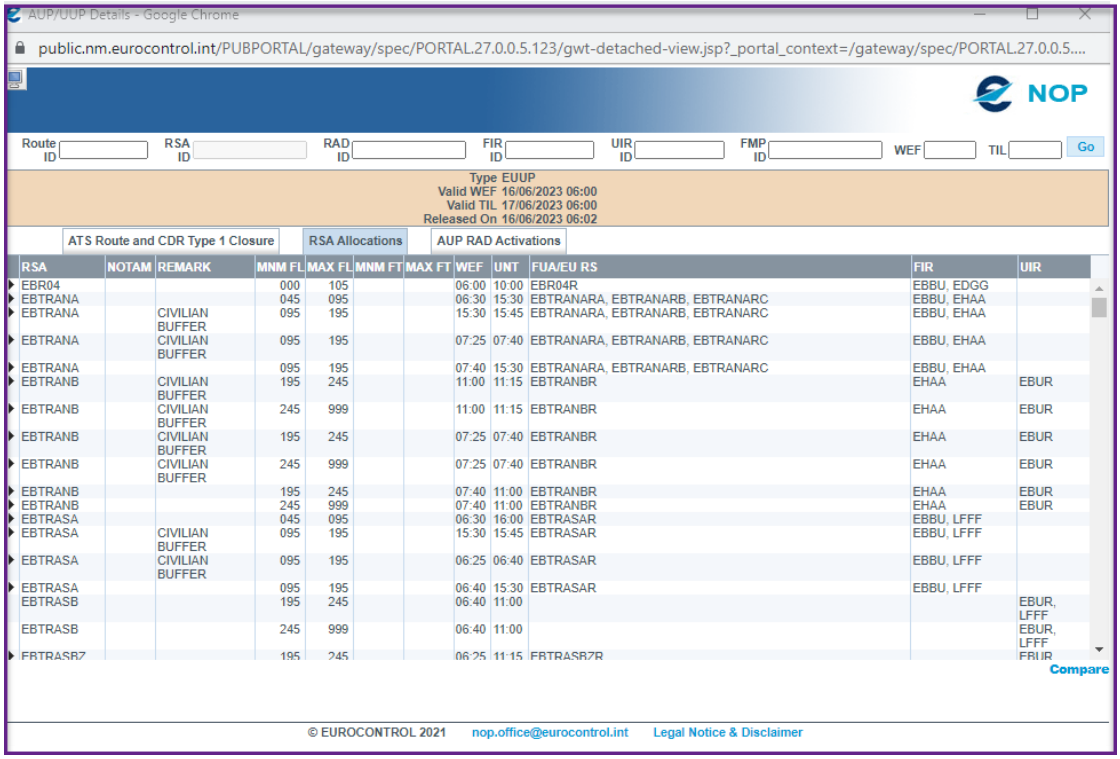
Two additional columns with RSA vertical limits expressed in FT (where applicable) will appear next to the ones displaying vertical limits in FL, both in RsaAllocation list and RsaAvailability list in AUP/UUP, and will be usable for entries for those areas published in AIP with feet as unit of measure.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

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



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.



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.

4.2.2 CACD Air Route Datasheet

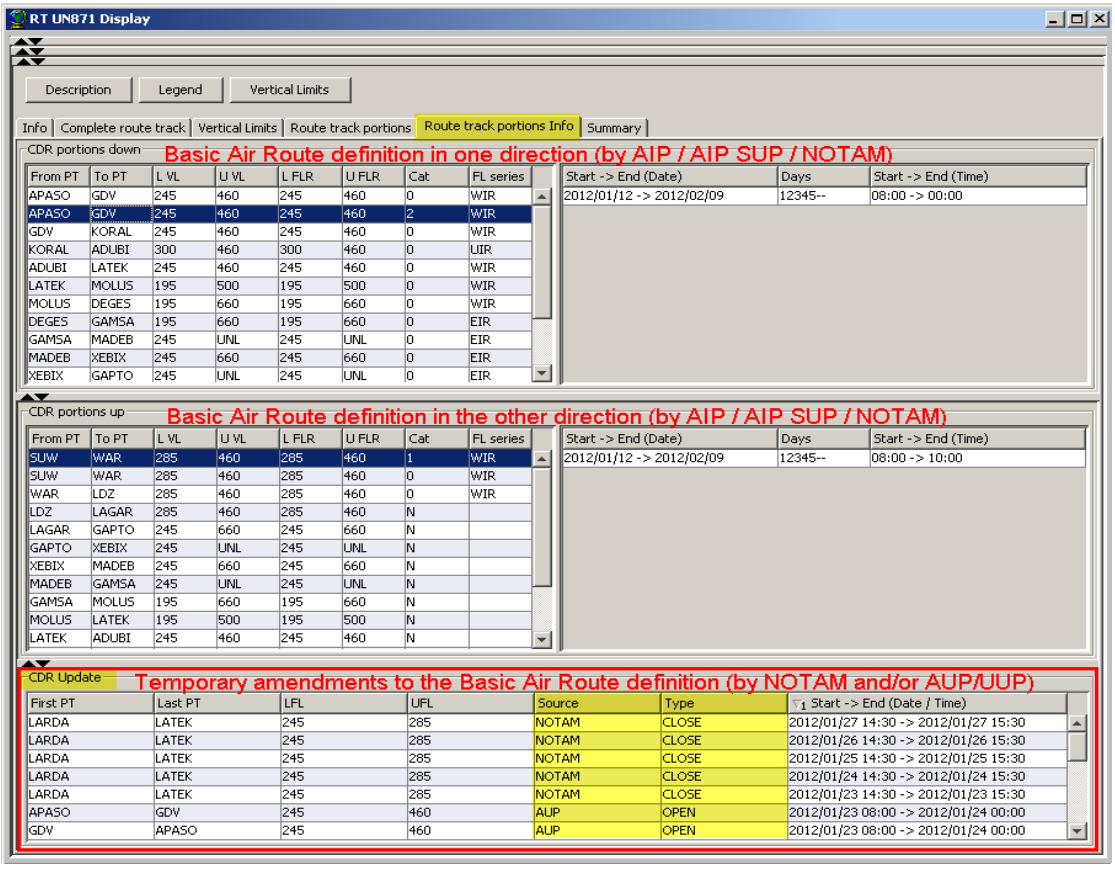
Air route definitions are available in CACD Air Route datasheets.

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.

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.



Example Air Route - Route track portions Info tab

4.3 FPL Buffer Zone (FBZ)

4.3.1 Data Sources

FPL Buffer Zone (FBZ) is an airspace volume which may be established in association to an RSA. The FBZ defines the lateral, vertical and time limits for the purpose of validating submitted IFR FPLs when the associated area is activated or planned to be activated.

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

4.3.2 Naming Conventions and Identifications

Naming conventions and identifications for areas, FBZs and NPZs, are defined in ERNIP Part 1 – Chapter 9. This chapter provides the authoritative rules for identification, including cases of multiple FBZs associated with a single RSA.

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).

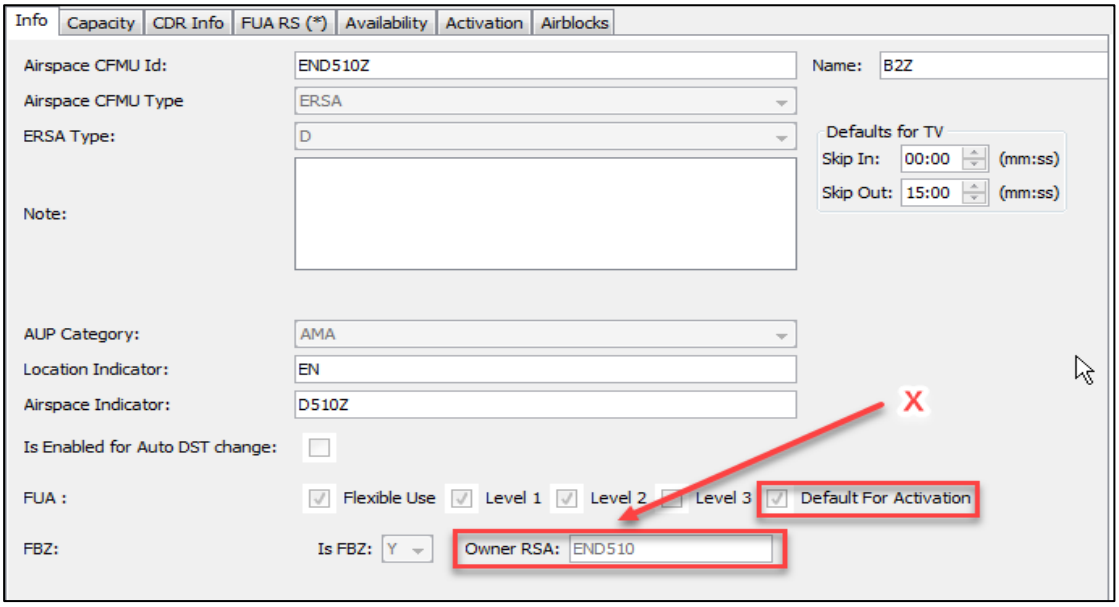


The objective of setting either the FBZ or the owner RSA as 'default active' is:

- 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.

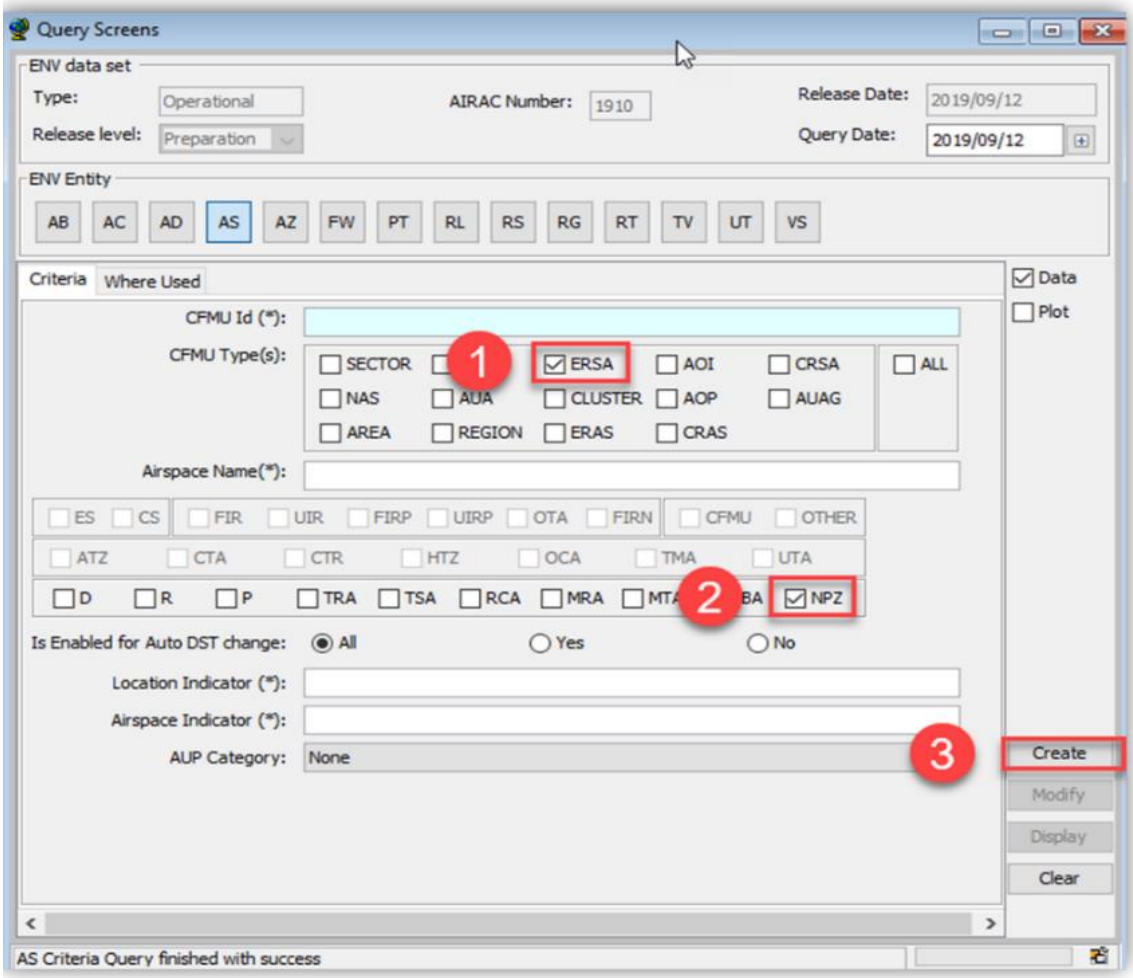
4.4 Non-standard Planning Zone (NPZ)

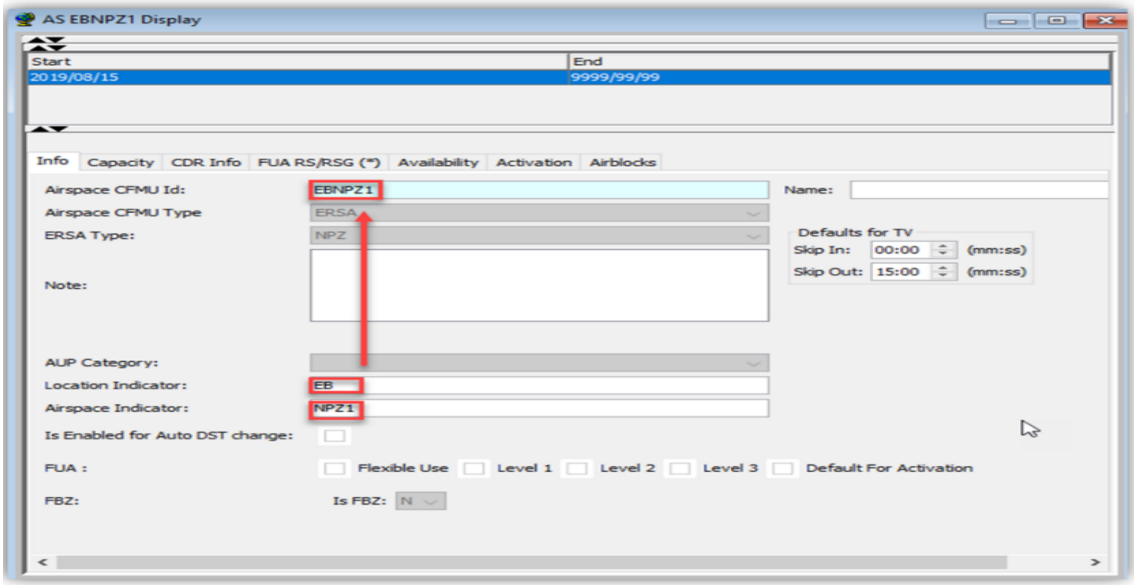
ATC wants to forbid flights from entering parts of its sector (small area in orange) called Non-standard Planning Zone (NPZ). Those areas are published in the AIP and they are available in CACD as such.

Introduction of Non-standard 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:


Query Screens
ENV data set
Type:
Operational
AIRAC Number:
1910
Release Date:
2019/09/12
Release level:
Preparation
Query Date:
2019/09/12
ENV Entity
AB AC AD AS AZ FW PT RL RS RG RT TV UT VS
Criteria
Where Used
Data
Plot
CFMU Id (*):
CFMU Type(s):
SECTOR
ERSA
AOI
CRSA
ALL
NAS
AUA
CLUSTER
AOP
AUAG
AREA
REGION
ERAS
CRAS
Airspace Name(*):
ES CS FIR UIR FIRP UIRP OTA FIRN CFMU OTHER
ATZ CTA CTR HTZ OCA TMA UTA
D R P TRA TSA RCA MRA MTA BA NPZ
Is Enabled for Auto DST change:
All
Yes
No
Location Indicator (*):
Airspace Indicator (*):
AUP Category:
None
1
2
3
Create
Modify
Display
Clear
AS Criteria Query finished with success


AS EBNPZ1 Display
Start
End
2019/08/15
9999/99/99
Info
Capacity
CDR Info
FUA RS/RSG (*)
Availability
Activation
Airblocks
Airspace CFMU Id:
EBNPZ1
Name:
Airspace CFMU Type
ERSA
ERSA Type:
NPZ
Defaults for TV
Skip In:
00:00
(mm:ss)
Skip Out:
15:00
(mm:ss)
Note:
AUP Category:
Location Indicator:
EB
Airspace Indicator:
NPZ1
Is Enabled for Auto DST change:
FUA :
Flexible Use
Level 1
Level 2
Level 3
Default For Activation
FBZ:
Is FBZ:
N

Rules:

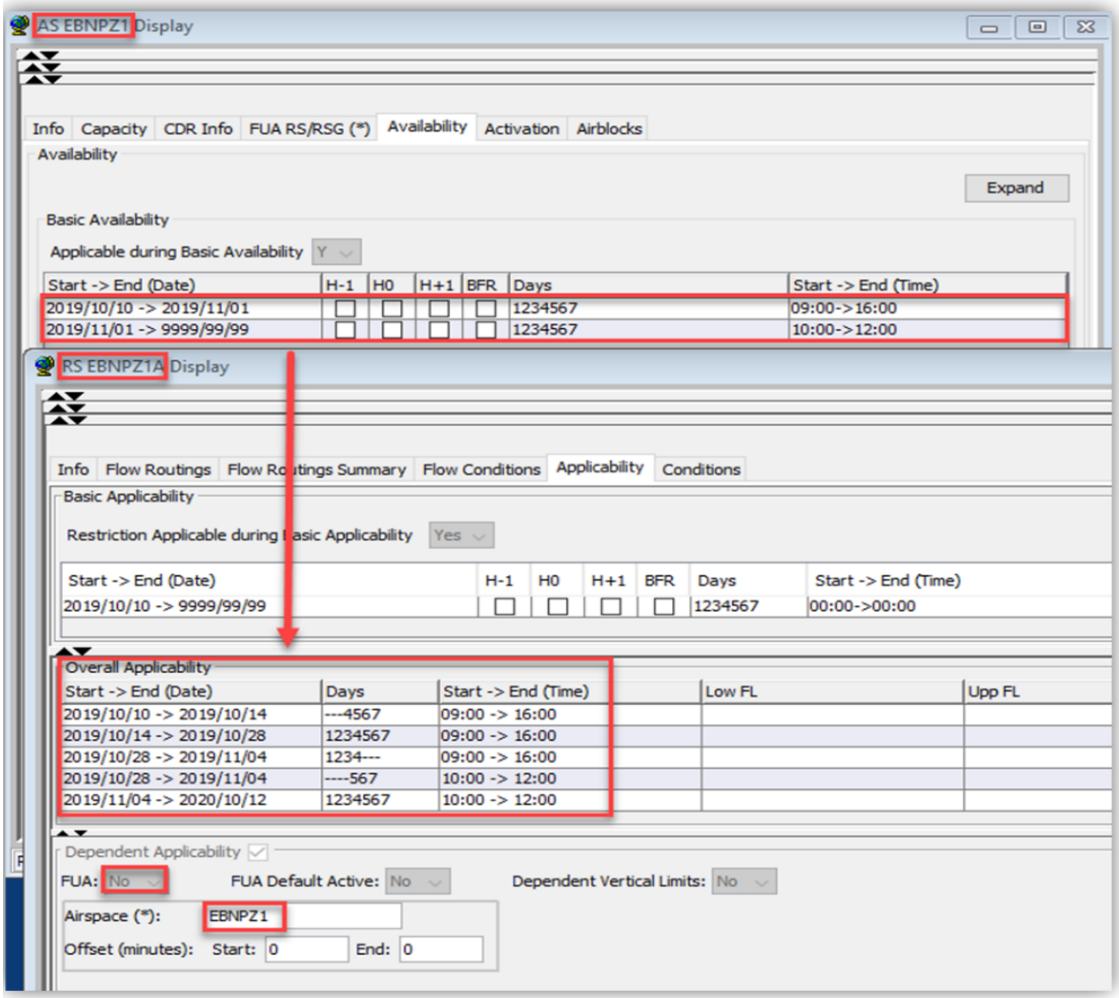
- Location Indicator: Country Code or “EU” in case of cross-border NPZ
- Airspace Indicator: “NPZ”[0-9][0-9][0-9]
- NPZ shall be an ERSA (no composed NPZ)
- NPZ can be of category AMA or NAM
- It can have no Nearby or Excluded routes associated to it
- NPZ cannot be a FBZ
- The related Restriction identifier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

The availability of the NPZ is defined:

- In the tab “Availability” Preparation Area. NPZs 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, FUA-RAD and AUP-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[4].

FUA-RAD Restrictions are published in the Route Availability Document except Annex 2C – FUA Traffic Flow Rules.

AUP-RAD Restrictions are provided by AMCs in coordination with their national FMPs. They could feature in any of the existing RAD annexes except Annex 2C – FUA Traffic Flow Rules; the main difference between static RAD restrictions and AUP-RAD restrictions lies with their time applicability which in the latter case is “dynamic”, meaning their activation/deactivation is decided at pre-tactical level (AUP) or tactical level (UUP) by the responsible AMCs/FMPs.

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 Route Availability Document except Annex 2C – FUA Traffic Flow 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.

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

A FUA-RAD Restriction must have:

- A Reference location – any airspace object (e.g. point)
- Dependant applicability based on RSA or FBZ or NPZ activation.
- 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.

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 AUP-RAD Restriction Type[5] (Technical enabler for concept of Dynamic RAD)

A new category of restrictions "AUP-RAD Restriction" has been introduced, to be differentiated from the existing FUA restrictions and FUA-RAD restrictions which are both directly linked to an RSA.

AUP-RAD Restrictions are restrictions directly and dynamically manageable through the AUP/UUP mechanism for limited time periods

AUR-RAD Restrictions are exclusively managed by either an AMC (exclusive) or an FMP

NMOC will pre-define the responsible AMC and FMP for every AUP-RAD Restriction (AMC is mandatory, FMP is optional: if no FMP is defined, only the AMC can control the AUP-RAD Restriction activation).

This new category "AUP RAD" will allow to replace permanent restrictions by restrictions that are only activated when required by a dependent applicability **on time**

The NM CIAM system shall allow pre-defined responsible FMPs to dynamically activate AUP-RAD Restrictions for limited time periods by the AUP/UUP

An AUP-RAD Restriction cannot be neither "FUA" nor "FUARAD".

Principles:

- **Single responsible per AUP-RAD Restriction:**
  - Only one single (logical) user can update the AUP-RAD Restriction activations: Either the AMC or the FMP and they are mutually exclusive.
  - There can be multiple FMP users per AUP/UUP, but only one FMP (one token) per each AUP RAD Restriction.
- **Access:**
  - All AMC and FMP, if involved in the process, in principle have potential read and write access to AUP-RAD Restriction activations.

  Nevertheless:
  - Only a single AMC or FMP has the rights to update a specific AUP-RAD Restriction activation.
  - The user that has the update right is defined in the ENV Restriction data:
    - Every AUP-RAD Restriction has a responsible AMC (mandatory) and optionally a responsible FMP,

[5] Only on OPT until further notice

        - If an FMP is given → only the FMP can do the activations
        - If no FMP is given → only the AMC can do the activations
    - The definition of the “responsible AMC” is also used to link the AUP-RAD Restriction to the corresponding AUP/UUP.
- **Multiple FMPs per AUP:**
    - There can be multiple FMP users per AUP, but only one single FMP user for each individual AUP-RAD Restriction.
    - It is also possible that the AMC is responsible for part of the AUP-RAD Restrictions.

Coordination process between FMP and AMC:
As NM systems do not provide support for coordination between FMP and AMC: FMP AUP RAD access should therefore be locally supported by a manual coordination process between AMC and FMP(s).

- FMP can update AUP-RAD Restriction activations when AUP is in INTENT or DRAFT status.
- FMP informs the AMC when working on the AUP-RAD Restriction activations and when the action is completed
- FMP informs AMC whenever there’s a need to demote the AUP from READY TO DRAFT, allowing FMP to update the AUP-RAD Restriction

Recommendation:
It’s possible to have different FMPs working with different AUP-RAD(s) assigned in their area of responsibility; each of them shall coordinate with the national AMC

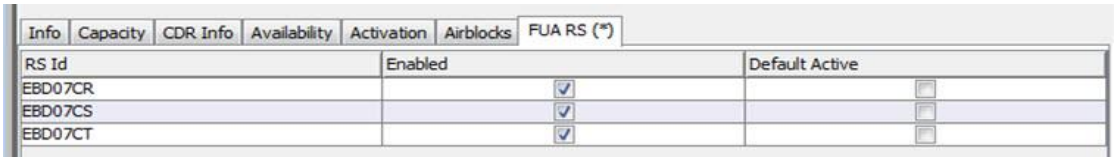
- Avoid multiple FMP physical users to work simultaneously on the same AUP-RAD
- If multiple physical users at the same Flow Management Position (FMP), they always have to use the “Refresh” button before creating activations and coordinate between physical users.

AMC remains responsible for the consolidation of the AUP/UUP (READY).

4.5.4 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’.



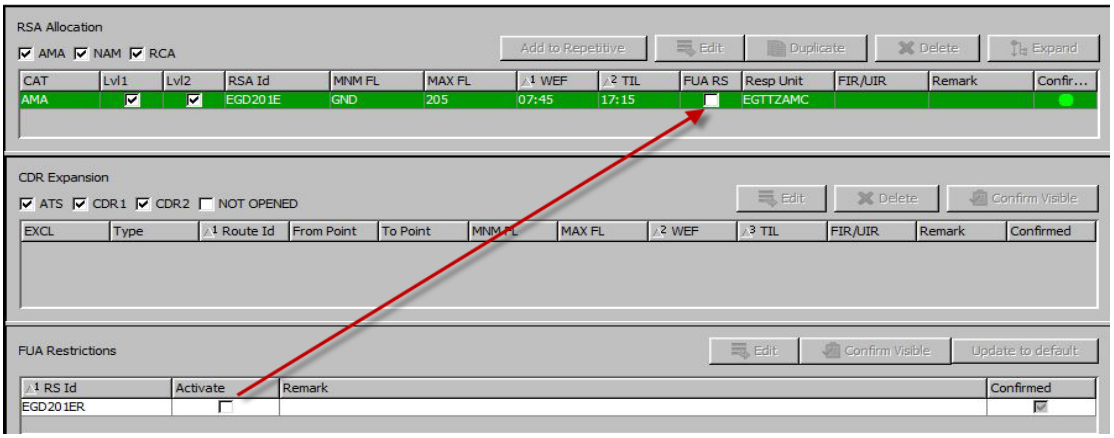
This activation setting in the CACD can be overruled in a CIAM (ASM tool) AUP/UUP by the AMC.

AUP/UUP RSAs tab

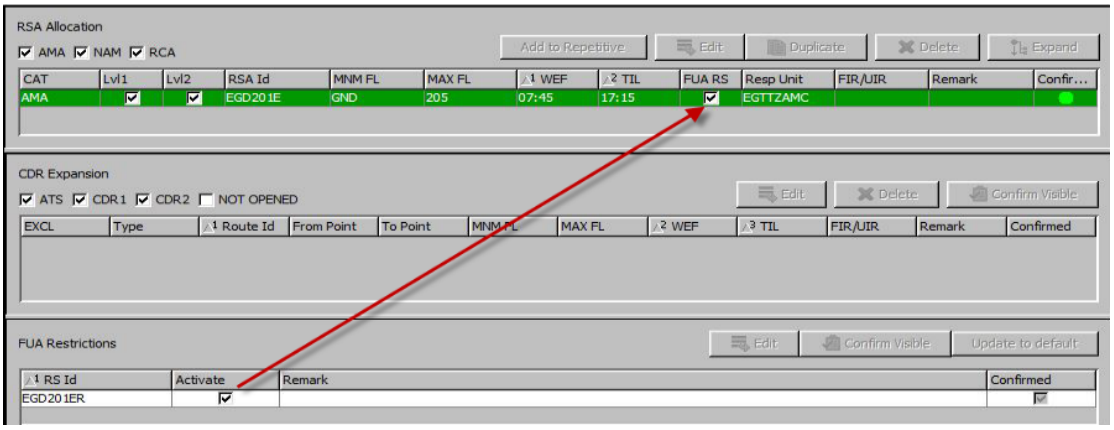
The activation or the FUA Restrictions (as defined in the CACD) can still be overruled in CIAM or any other ASM tool by the AMC, and each Restriction (even those not activated) must be confirmed by the AMC.

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

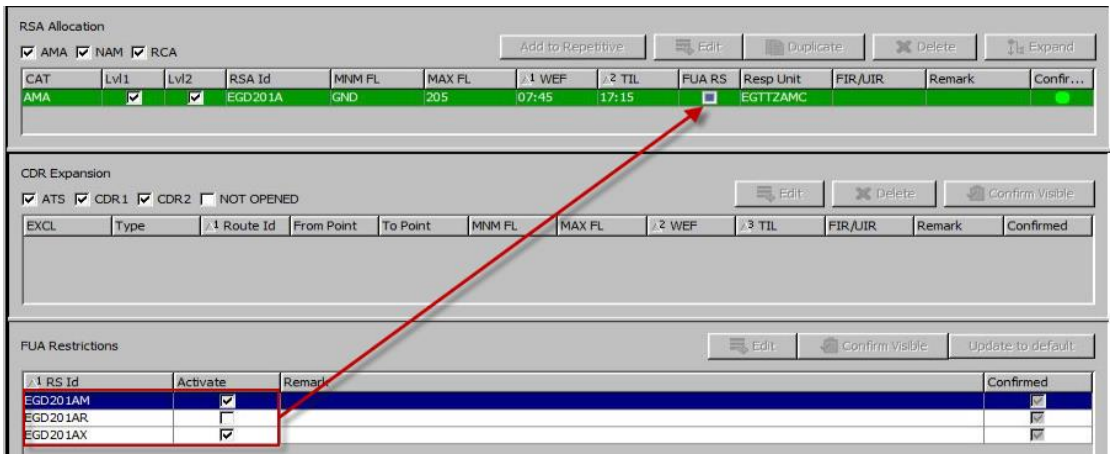
Blank: No FUA Restrictions associated with this RSA are active.



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.



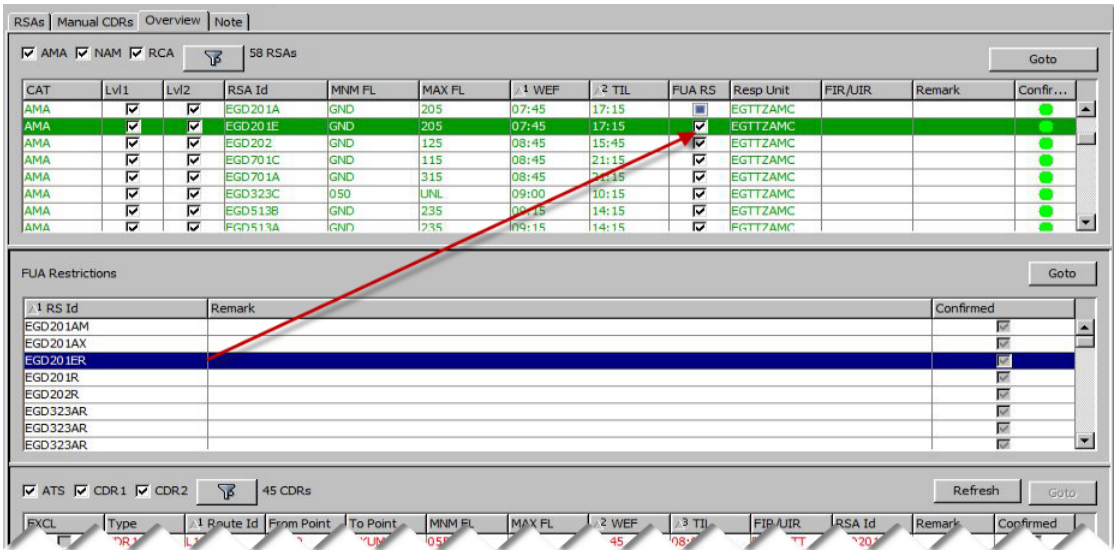
AUP/UUP Overview tab

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

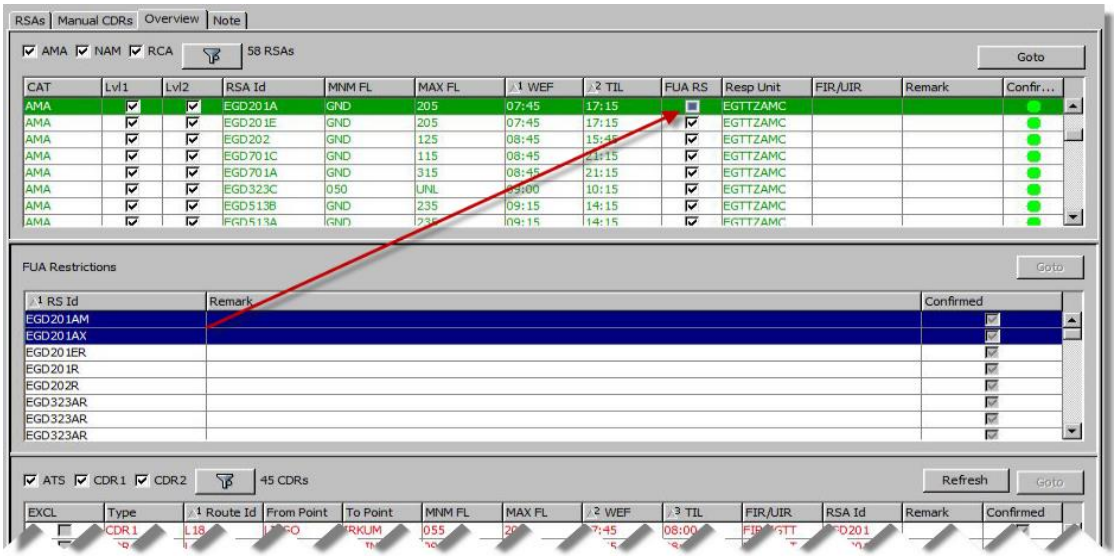
The same convention is used in the ‘FUA RS’ column of the RSA allocations panel as in the RSAs tab (see above), and the following information will be shown.

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.



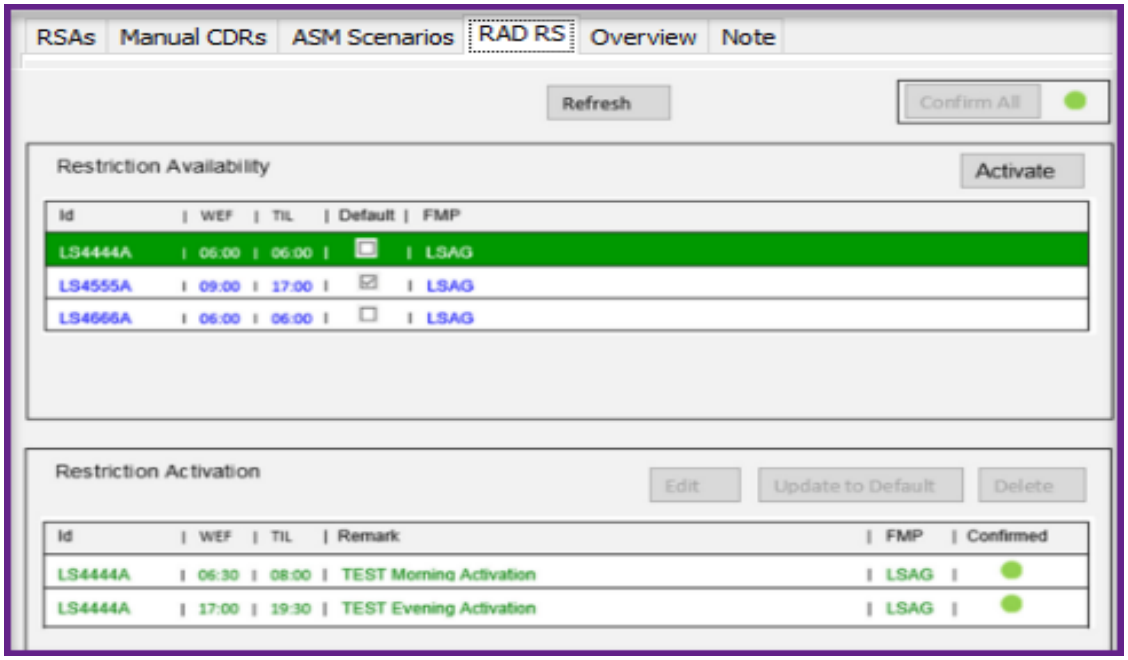
A shaded square in the ‘FUA RS’ column and one or more highlighted restrictions in the FUA Restrictions pane: Some, but not all, FUA Restrictions associated with this RSA are active.



4.5.5 Implementation of AUP-RAD Restrictions[6] in CACD and usage in CIAM

In CIAM, new tab AUP RAD RS with 2 frames:

- Restriction Availability
- Restriction Activation



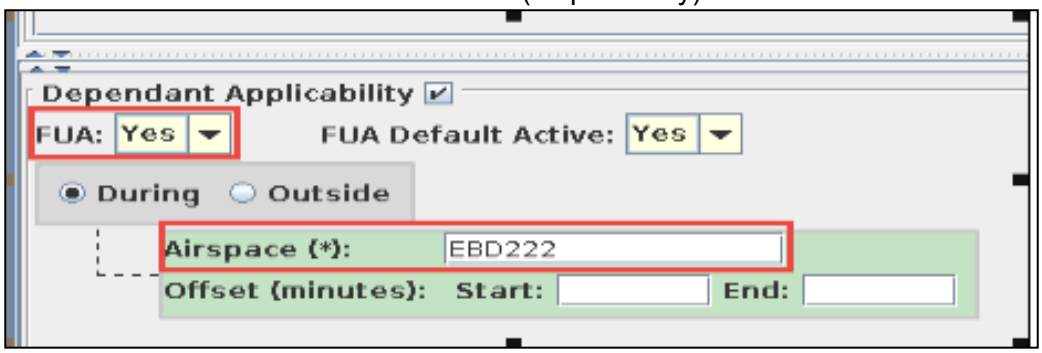
4.5.6 Multiple AS/RT for Restriction Dependant Applicability

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).

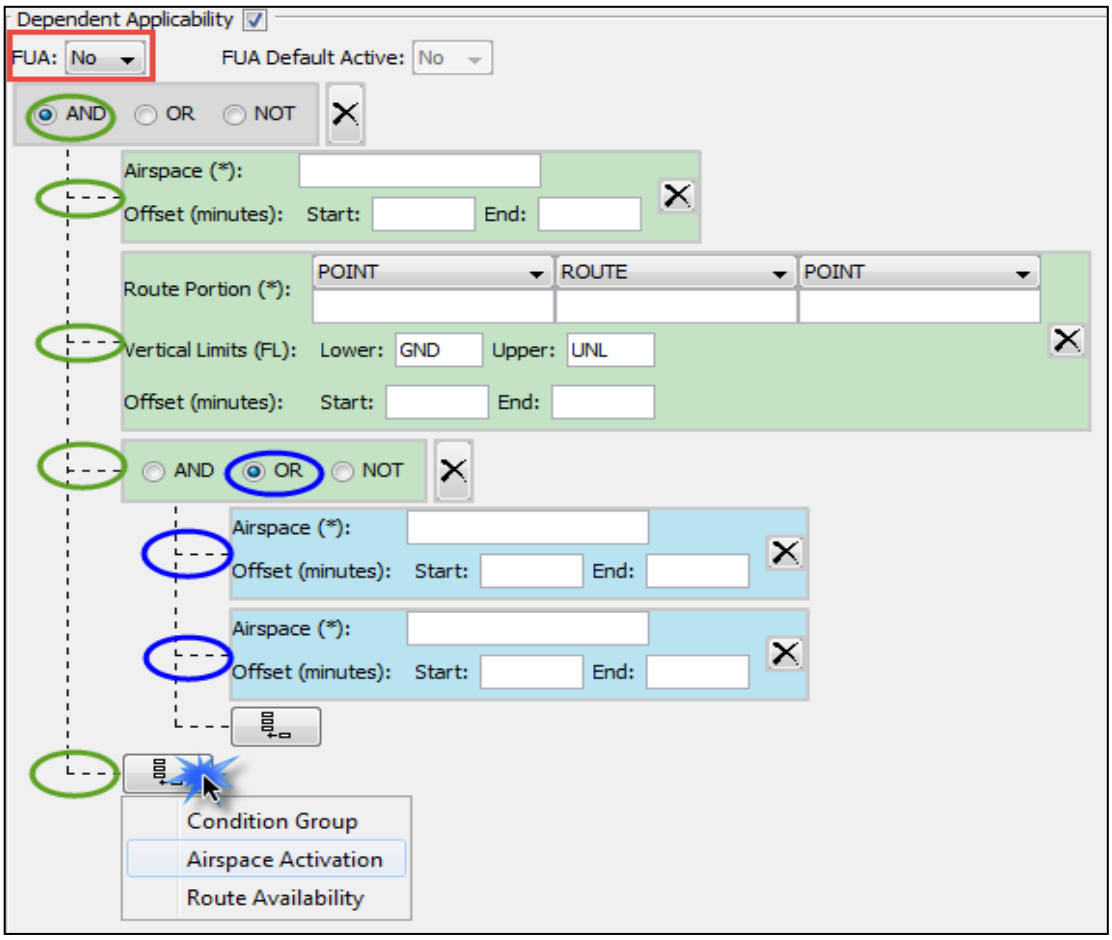


- If FUA ='NO', there can be at least one airspace or at least one route.

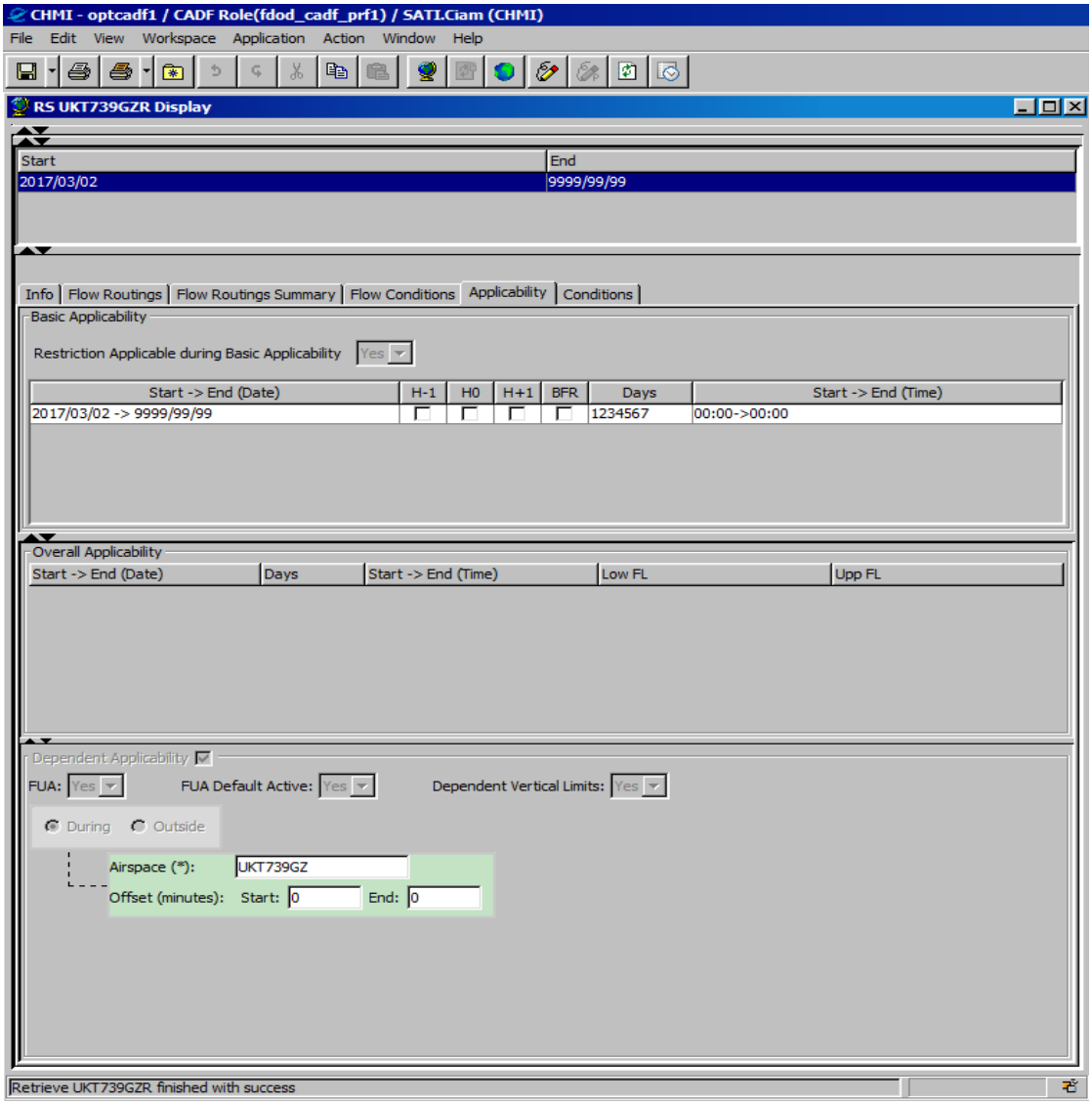
[6] Only on OPT until further notice

Note: In box Airspace, Airspace actually means “Airspace Activation”.

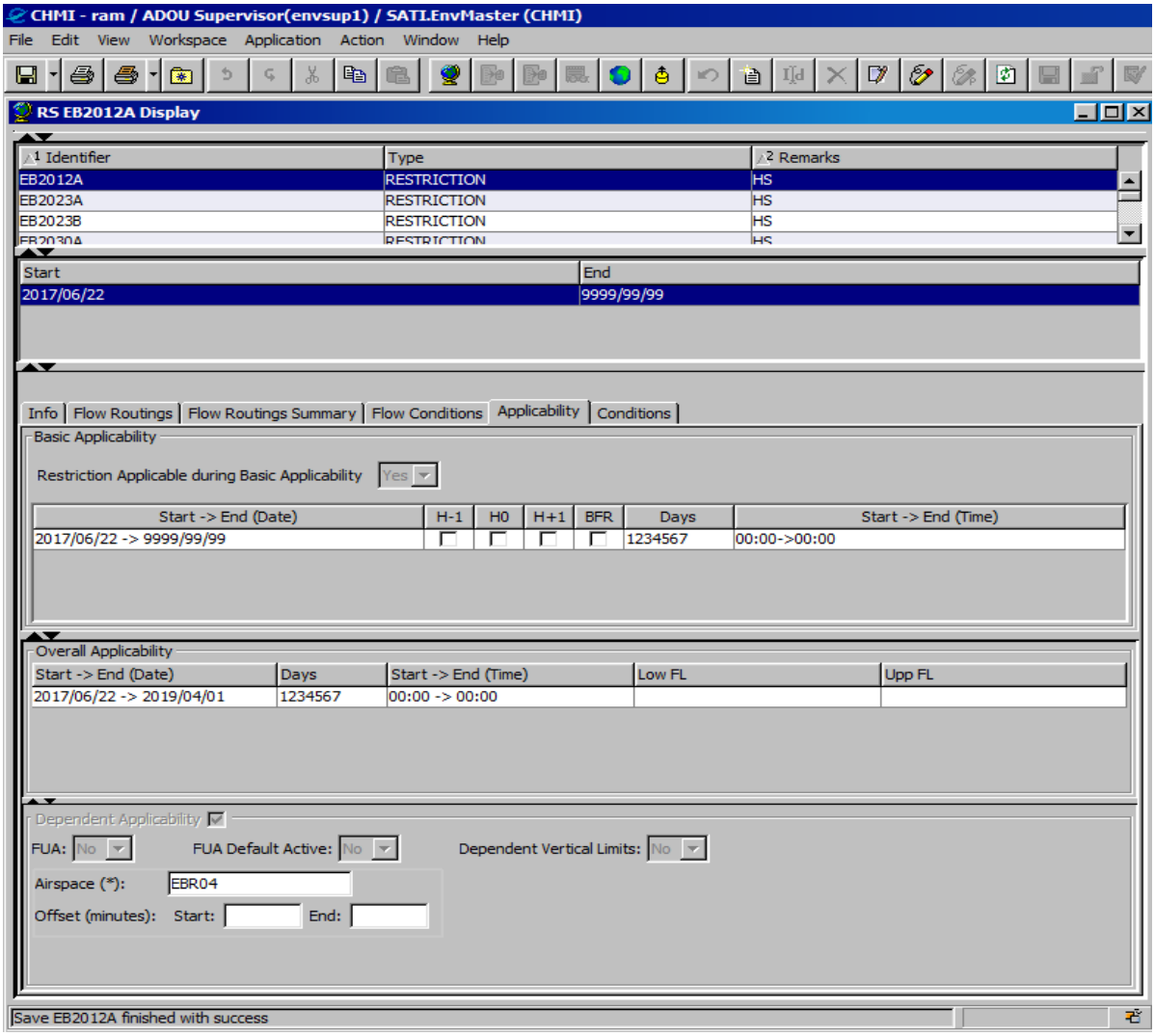
In box Route Portion, Route Portion actually means” Route Portion Availability”.



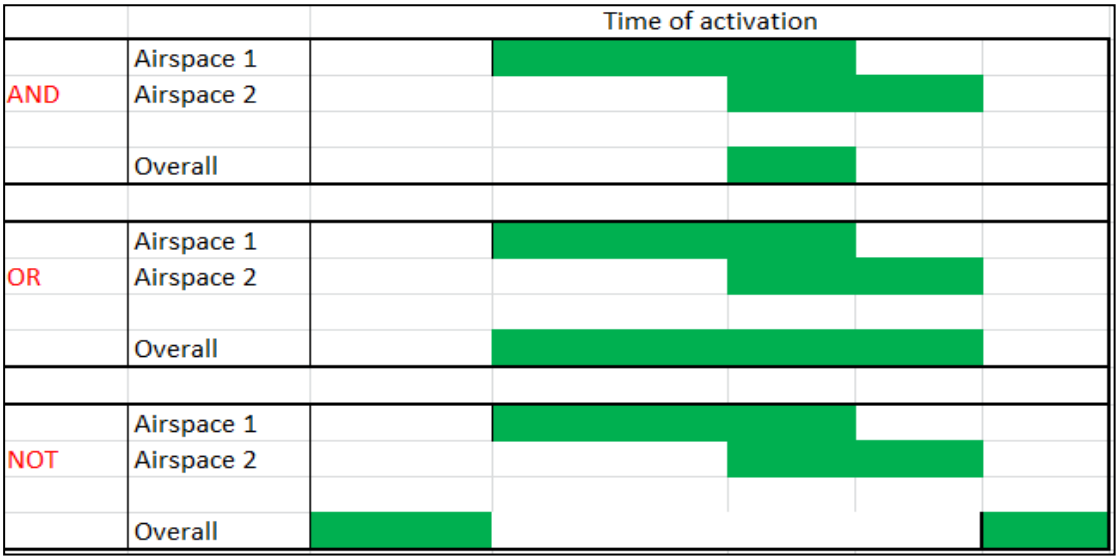
Example FUA set to YES:



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



4.5.7 Restriction Grouping

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

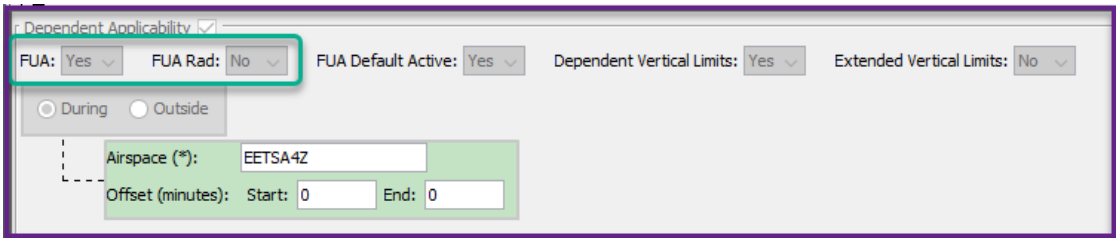
Category: FUA or FUA-RAD

- 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



4.5.8 Difference between FUA Restriction and FUA/RAD Restriction and AUP/ RAD Restriction (Dynamic RAD)

FUA Restriction	FUA/RAD Restriction	AUP/RAD restriction
Airspace object • RSA • FBZ Note: traffic must cross the RSA/FBZ to be affected	Airspace object with dependant applicability • RSA • FBZ Note: traffic not necessarily crossing the RSA/FBZ is affected	Airspace object trigger zone used for time definition (only during dynamic RAD trials)
Publication • RAD Annex 2C • EU/EURO	Publication • RAD Annex 2A/2B/3A/3B • EU/EURO	Publication • RAD Annex 2A/2B/3A/3B
Notification • AUP/UUP	Notification • AUP/UUP	Notification • AUP/UUP
Reference location • RSA • FBZ	Reference location • Point/s • Airspace	Reference location Everything except FBZ

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.

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, AD SNOS and ASMSG group, if FTI is affecting all AMCs.
5. The FTI is published provided that the NM safety assessment is positive. OPL/ASM will be involved in producing the safety assessment..
6. In case the safety assessment outcome is classified as Types “A” and “B”, EASA approval is required before introducing a change or run a live trial.
7. The FTI shall have a clear scope and time period of application.
8. The FTI, together with its associated OI and safety assessment, 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.
9. The FTIs are published on the NOP Portal, under Network Operations HANDBOOK/Network Operations Procedure Updates/Airspace Management https://www.nm.eurocontrol.int/STATIC/html/indexProcedureUpdates.html, 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 SharePoint:

https://eurocontrol.sharepoint.com/sites/comm-ASM-SG, under Shared Documents/CADF-AMC Operational Documents/FUA Temporary Instructions

6 LEAD AMC CONCEPT

6.1 Scope

The lead AMC concept should be applied whenever required for operational reasons within the scope of Cross Border Operations or any interdependency between neighbouring States including CDR/ATS routes affected by the activation of areas. 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 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. In case of Cross Border Areas, the Lead AMC concept should be established according to agreed priority rules and an associated timetable.

Those cross border CDRs 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 RSAs of the AMC, but for which the AMC is responsible.

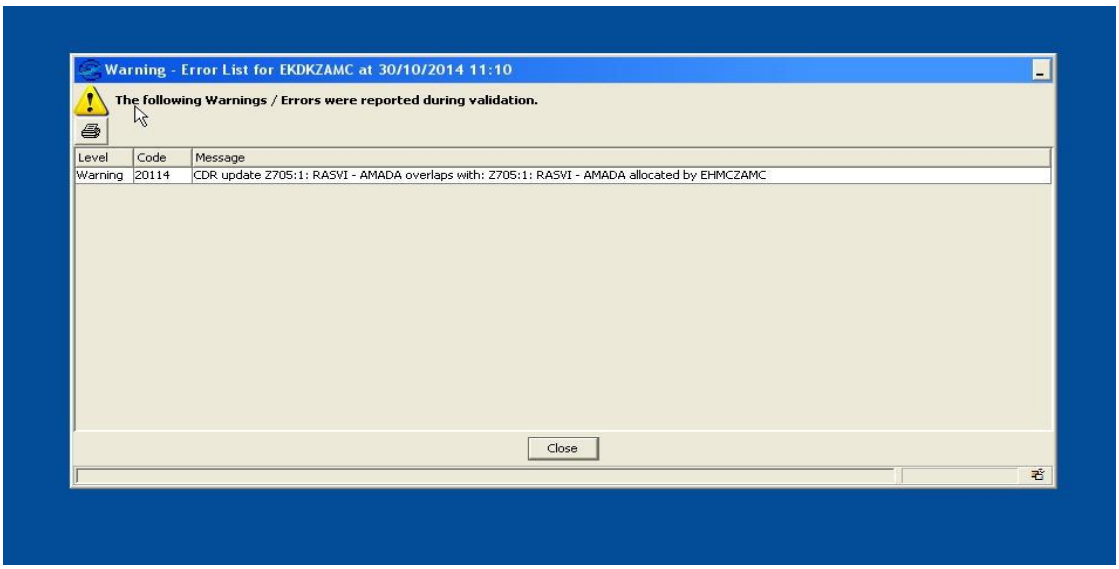
The Related Routes input for a given AMC will enable this AMC to use these routes in their AUPs/UUP’s although they are located geographically in another AMC’’s area of responsibility. These route portions will become available in CIAM as “Manual CDR’s” in the AUP/UUP of the AMC.

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.

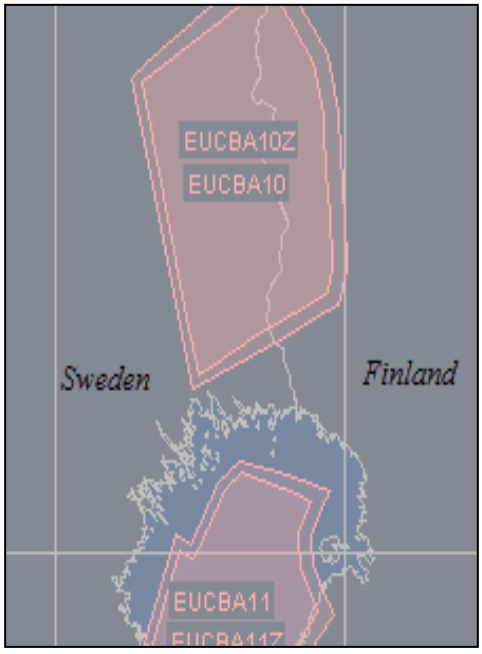
6.7 LEAD AMC Live Updateable

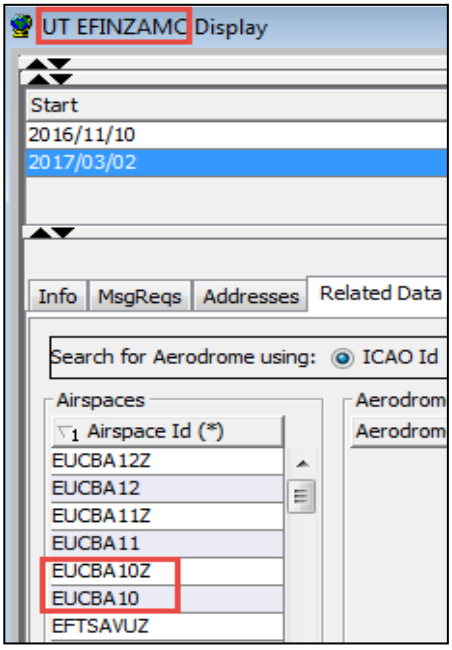
The lead AMC concept already applies on cross-border RSAs; lead AMC cannot be modified outside AIRAC.

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.

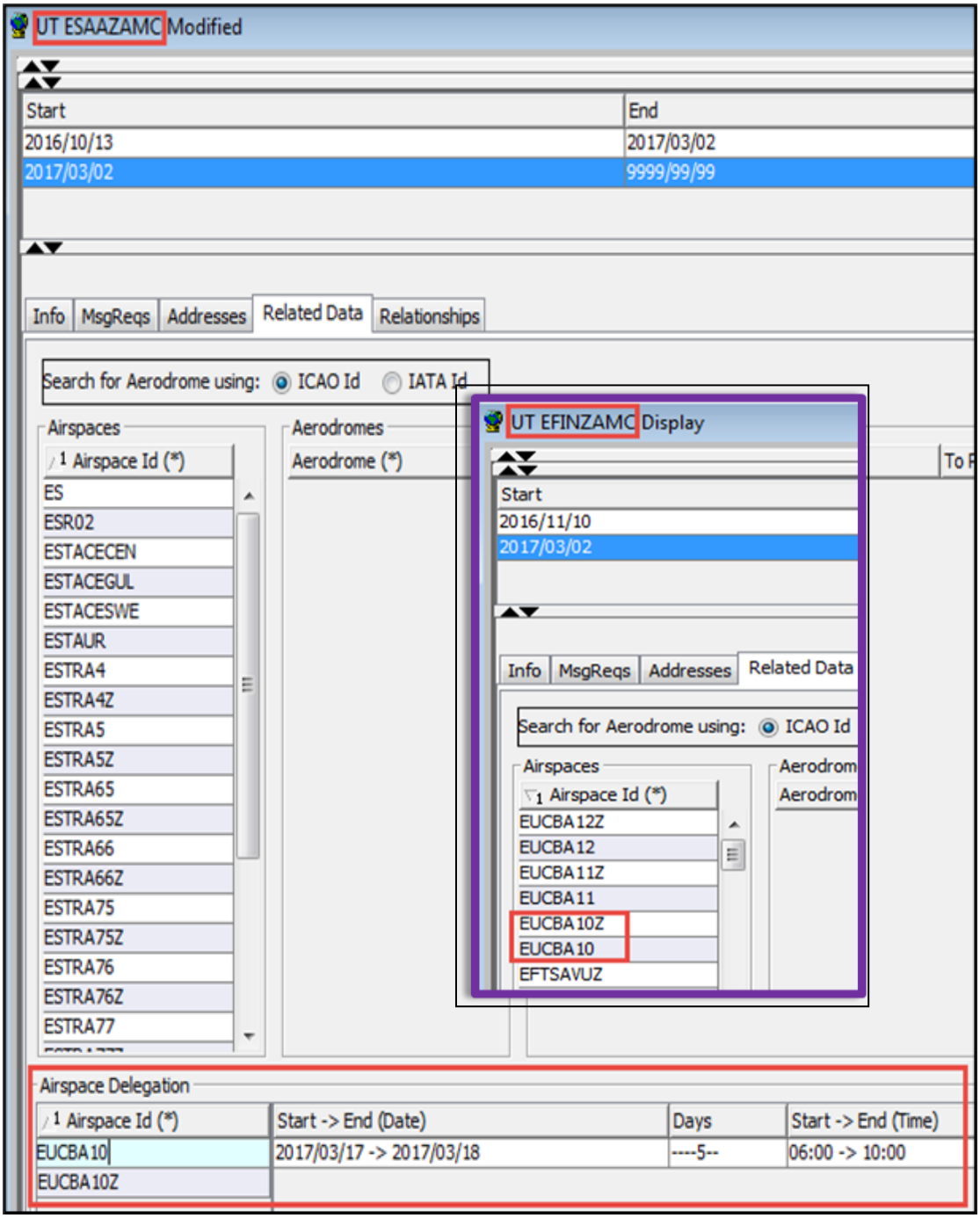
➔ Need to promote and facilitate the establishment and usage of Cross Border Areas amongst different States to allow bigger flexibility and to facilitate transparent publication in AUP/UUP.



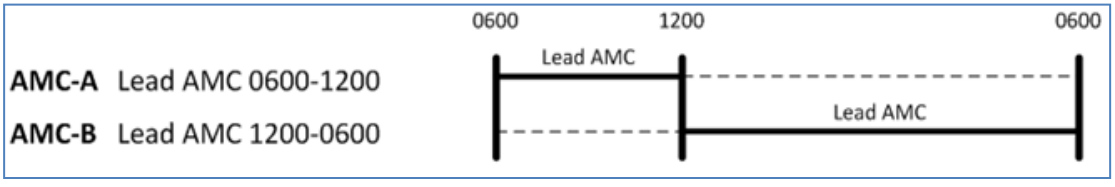


Solution

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 AIRSPACE SCENARIO

- For information only –



Group several RSAs which are activated simultaneously

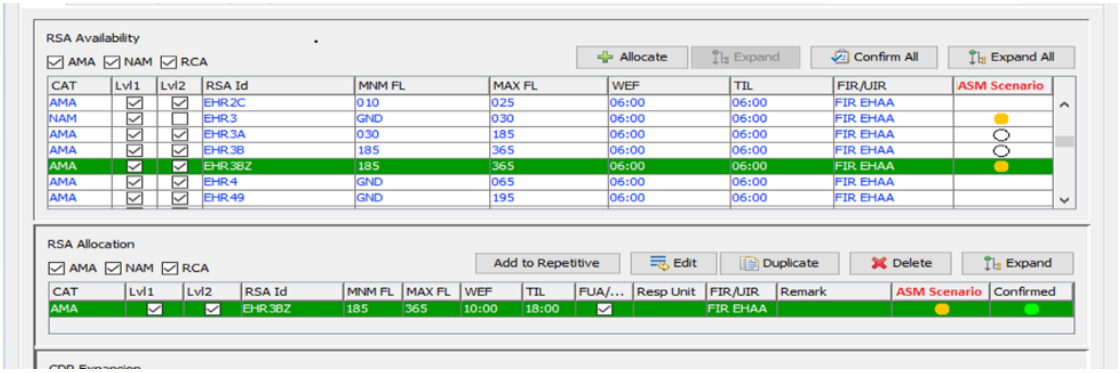
An airspace scenario is a pre-defined and coordinated set of RSA and associated ASM measures like FBZ activations or route closures.

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 Airspace Scenario[7] are allocated in AUP(s)/UUP(s).

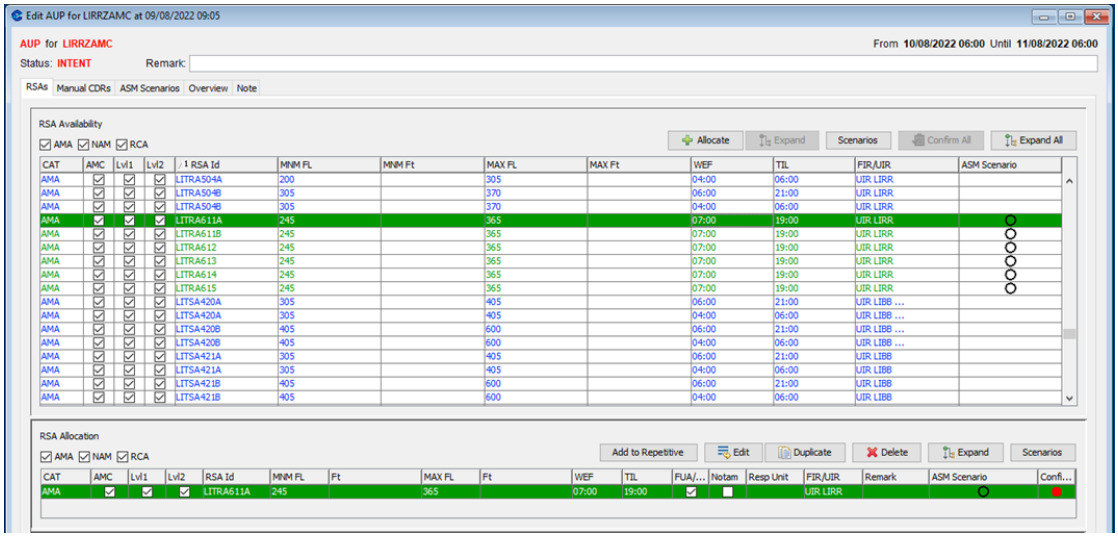
Monitored Airspace Scenario flag in AUP RSA Allocation & RSA Availability:

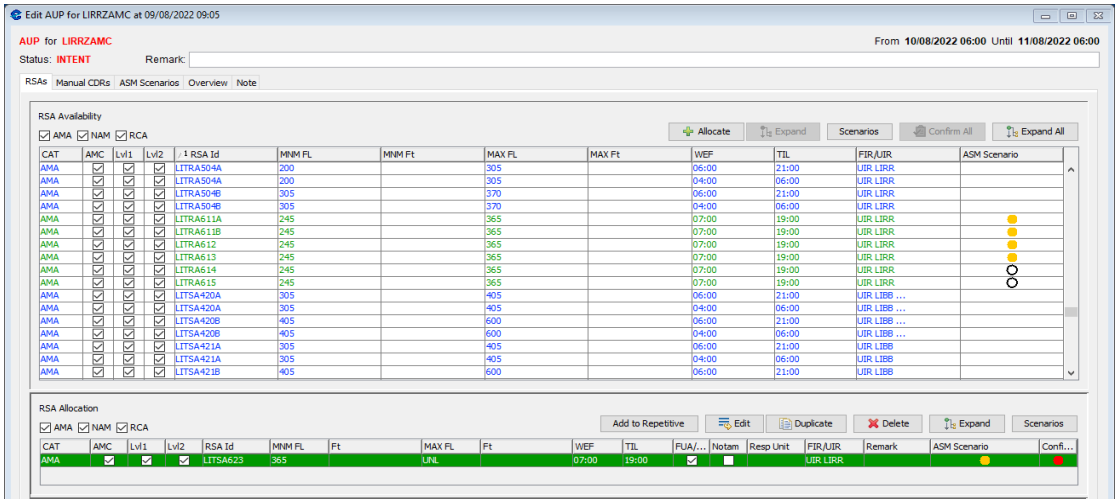
- no Airspace scenario
- inactive Airspace scenario
- active Airspace scenario

The scenario flag is updated when allocating the RSA.



[7] The terminology Airspace scenario is consistent with the COMMISSION IMPLEMENTING REGULATION (EU) 2021/116 (CP1 Implementation – AF3). By convention in the NM system the term used is “ASM scenario”.





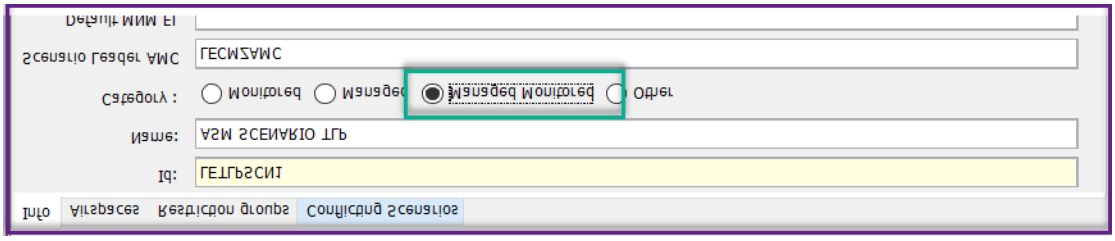
Managed: A predefined set of RSAs that can be allocated by AUP/UUP as a set. These RSAs must belong to, or be delegated to, the same AMC. Cross-border Airspace Scenarios are currently forbidden. Managed Airspace Scenarios can have associated Restriction Groups (not implemented yet).

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

ManagedMonitored: it is possible to have an Airspace Scenario managed and monitored with the same Scenario ID. That means that the scenario can be voluntarily activated by the user and is in addition monitored by the CIAM system when its composing RSAs are all activated one by one.

The scenario category can be defined in CACD

Detailed information in the AD Ops manual – part ASC



Overview Scenario State values and symbols:

None (= *blank field*)

○	**Inactive**	(Monitored or Managed)
●	**Active**	(Monitored)
●	**ActivatedNotConfirmed**	(Managed)
●	**ActivatedConfirmed**	(Managed)

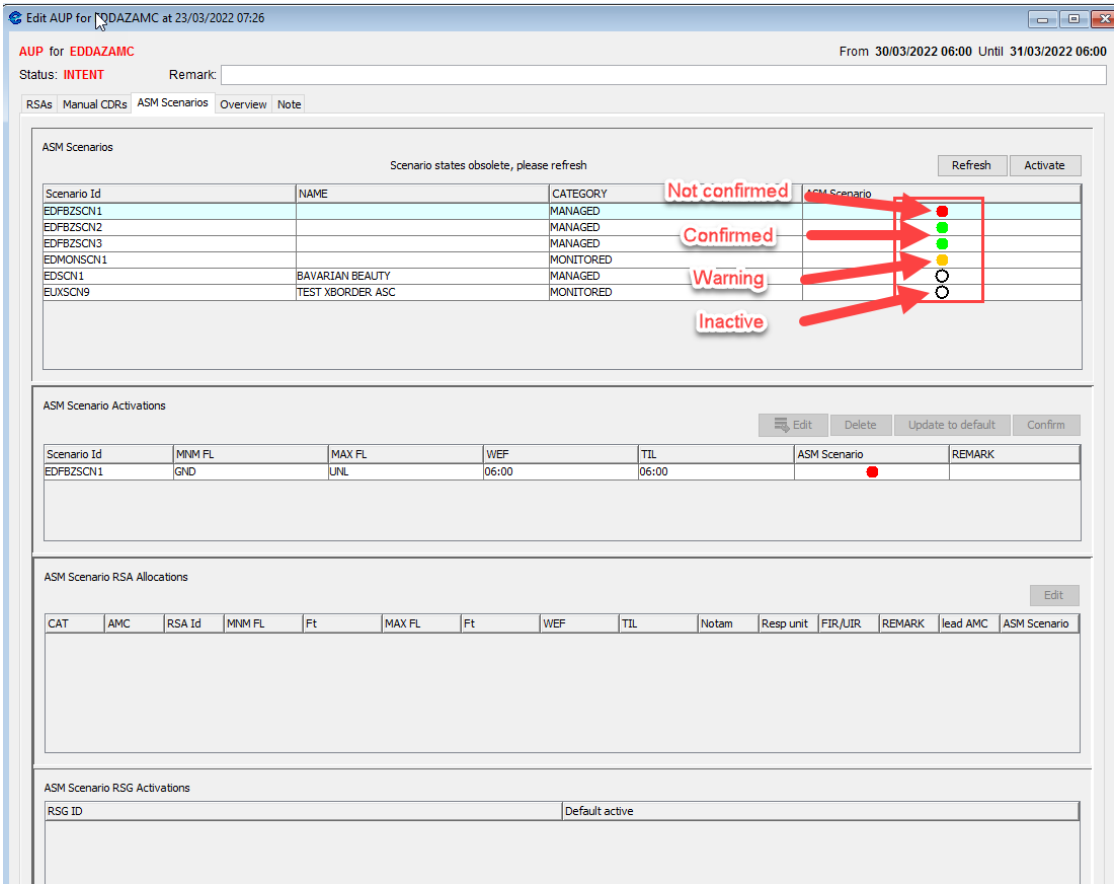
None: no Airspace Scenario or Airspace Scenario in undefined state

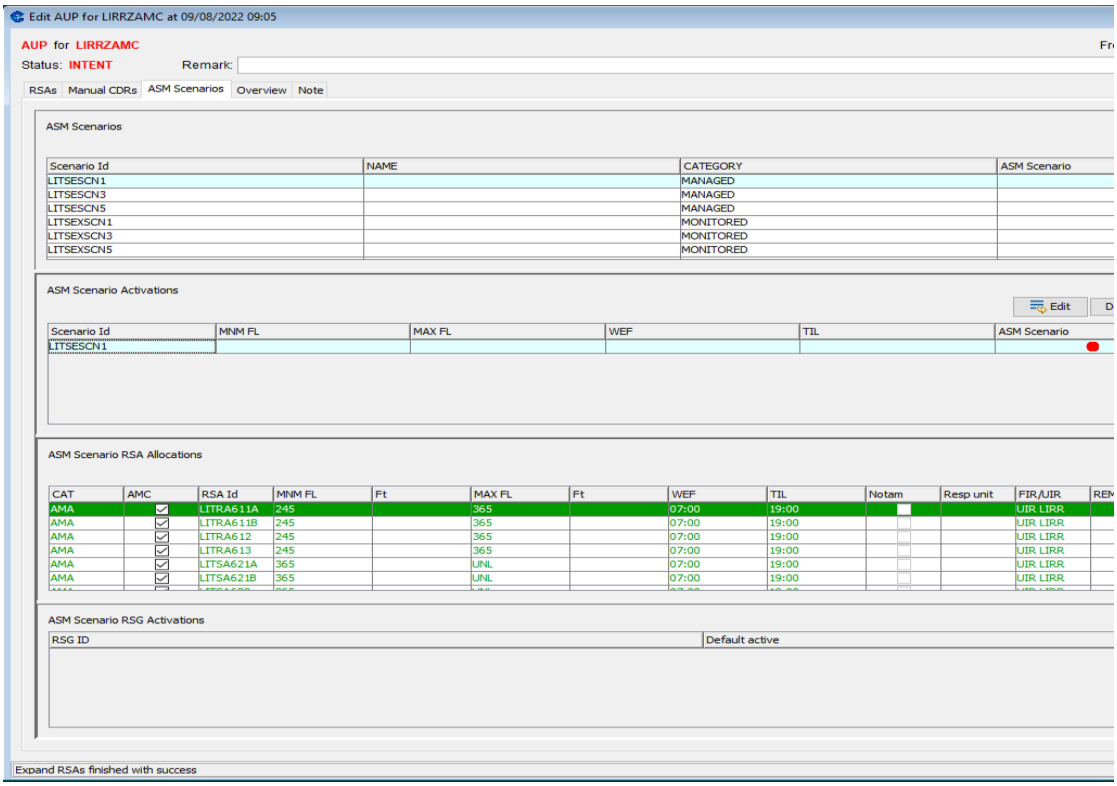
Inactive: Airspace Scenario exists but is not active

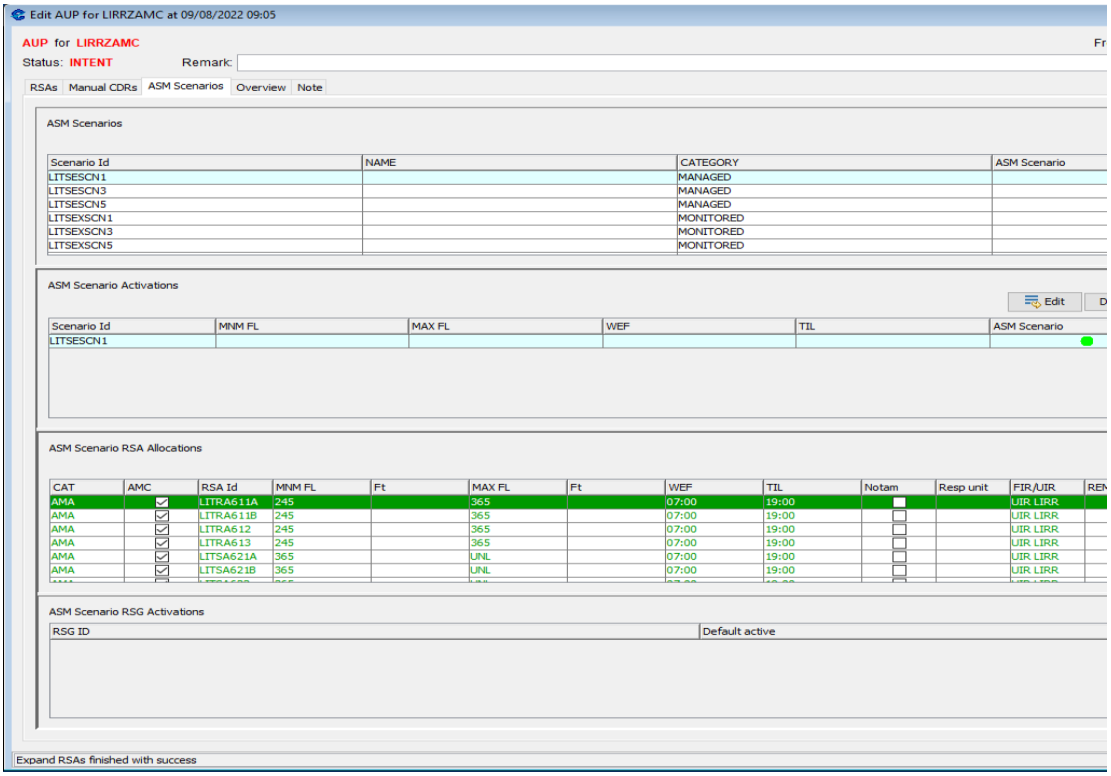
Active: 'Monitored' Airspace Scenario is active (as detected by the system monitoring)

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

ActivatedConfirmed: 'Managed' Airspace Scenario is activated and confirmed

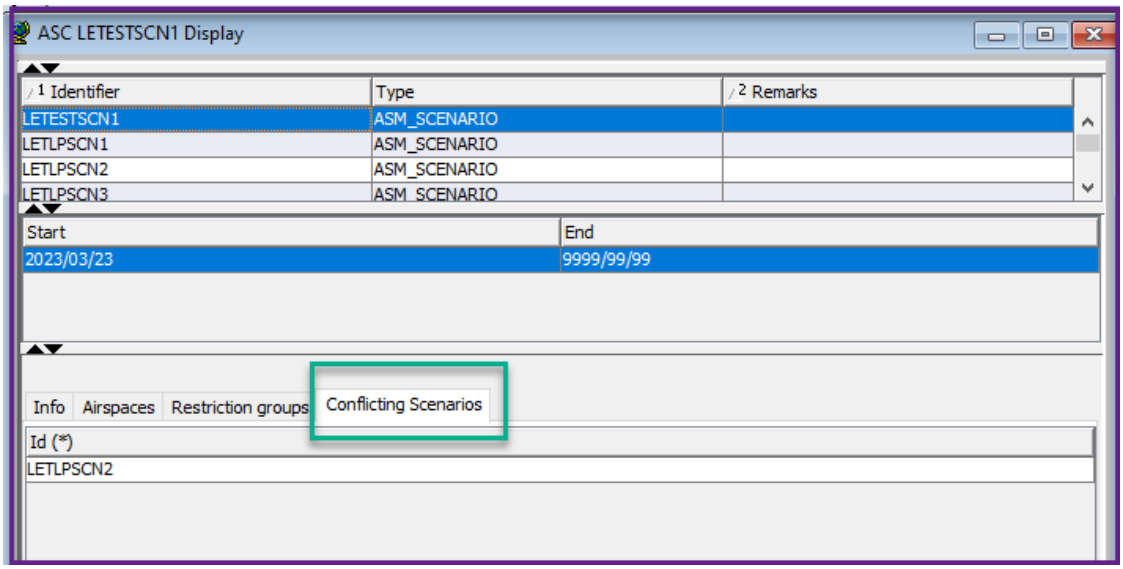

Edit AUP for EDDAZAMC at 23/03/2022 07:26
AUP for EDDAZAMC
From 30/03/2022 06:00 Until 31/03/2022 06:00
Status: INTENT
Remark:
RSAs
Manual CDRs
ASM Scenarios
Overview
Note
ASM Scenarios
Scenario states obsolete, please refresh
Refresh
Activate
Scenario Id
NAME
CATEGORY
ASM Scenario
EDFBZSCN1
MANAGED
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
Status: INTENT
Remark:
RSAs
Manual CDRs
ASM Scenarios
Overview
Note
ASM Scenarios
Scenario Id
NAME
CATEGORY
ASM Scenario
LITSESCN1
MANAGED
LITSESCN3
MANAGED
LITSESCN5
MANAGED
LITSEXSCN1
MONITORED
LITSEXSCN3
MONITORED
LITSEXSCN5
MONITORED
ASM Scenario Activations
Edit
Scenario Id
MNM FL
MAX FL
WEF
TIL
ASM Scenario
LITSESCN1
ASM Scenario RSA Allocations
CAT
AMC
RSA Id
MNM FL
Ft
MAX FL
Ft
WEF
TIL
Notam
Resp unit
FIR/UIR
AMA
LITRA611A
245
365
07:00
19:00
UIR LIRR
AMA
LITRA611B
245
365
07:00
19:00
UIR LIRR
AMA
LITRA612
245
365
07:00
19:00
UIR LIRR
AMA
LITRA613
245
365
07:00
19:00
UIR LIRR
AMA
LITSA621A
365
UNL
07:00
19:00
UIR LIRR
AMA
LITSA621B
365
UNL
07:00
19:00
UIR LIRR
ASM Scenario RSG Activations
RSG ID
Default active
Expand RSAs finished with success



Conflicting Scenarios: scenarios that cannot be activated simultaneously shall be monitored. They shall be monitored, both at National and X-Border level.

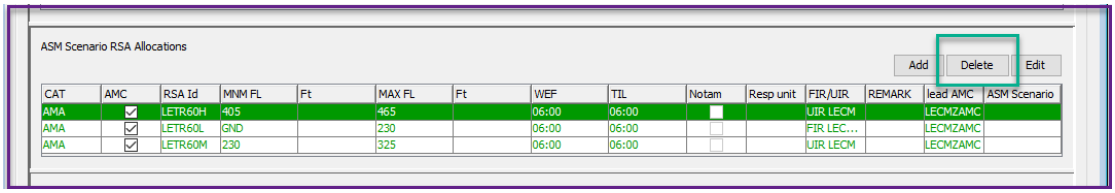
The tab lists all IDs of the Conflicting Scenarios with the selected one displayed, which need to be monitored



Add/delete RSA Allocation from a scenario

The «Delete» button has been created to be able to remove an RSA allocation from an existing Airspace Scenario

The «Add» button has been created to be able to add back the RSA allocation/s removed from the Airspace Scenario



The P3 activation of one RSA (having all the remaining areas of a ManagedMonitored scenario already allocated with AUP or previous UUP) with a UUP is triggering the monitoring of the scenario.

A warning in case of activation of a "ManagedMonitored" Airspace Scenario in case of P3 activation of one area with a successive UUP will be displayed.

Harmonised Airspace scenario identification

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

National Airspace scenario identification

a) A group of two letters, representing the ICAO Country Code of the State; followed by
b) The geographical area description / location (up to 6 digits); followed by
c) "SCN" and max 2 digits (1 to 99) for the scenario numbering — SCN##; potentially followed by
d) "RG" and 1 digit (1 to 9) for the associated Restriction Group — RG#, if any[8].

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 Airspace 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] Functionality not yet implemented

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 SharePoint under Shared Documents – CADF AMC operational documents – contacts.

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
		TLP status	WHITE, GREEN, AMBER, RED

1. **Introduction**
   Write the introduction here
2. **Description of the procedure**
   Write the full description of the procedure here
   Signature: **Head of NMOC**
3. **Attachments XY**
4. **Annexes XV**

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 - DATA SUBMISSION FORM FOR ASM RELATED DATA (EXAMPLES)

DATA SUBMISSION FORM FOR ASM RELATED DATA			
Addressees: EUROCONTROL - NM **to: NM/AD_Team** nm.ad.spvr@eurocontrol.int			
Originator:			
Date of Submission:			
Changes are effective:	**From**:	**Till:**	
Levels/time of CDR category: **New:** **Change: Delete:** **Route ID**: **Route Portion**: **CDR category**: **From:** **Till:**			
Levels/time of RSA's: **New:** **Change: Delete:** **RSA ID**: **Min FL**: **Max FL**: **From:** **Till:**			

Lead AMC:	**Delegated AMC**:		
	New:	**Change:**	**Delete:**
Route ID :			
Route Portion (From PT / To PT):			
RSA ID:			
From:			
Till:			

Nearby CDR(s) / route (s):	**New:**	**Change:**	**Delete:**
Route ID :			
RSA ID:			
Route Portion (From PT / To PT):			
Low FL:			
Upp FL:			
Till:			
From:			

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

Route ID :

RSA ID:

Route Portion (From PT / To PT):

From

Till:

AMA: (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:

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: Change: Delete:

RSA ID:

Restriction:

FUA (Y/N):

Operational goal:

Affected routes/DCT'(s)/Airspaces:

From: Till:

FUA Restriction: (Permanent restrictions)

New: Change: Delete:

RSA ID:

Restriction:

Operational goal:

Affected routes/DCT'(s)/Airspaces:

Requested Change:

From:

Till:

ANNEX 3 - AMC/CADF CONTINGENCY PROCEDURES

Source: ASM Handbook – Procedures for Airspace Management – Annex 10 – Annex B)

Preamble: these procedures refer only to the publication of AUP at D-1 and in principle no UUP Publication is expected during the application of the contingency procedures.

B.1. The AMC cannot process AUP via CIAM/local ASM tool but all NM systems are serviceable and other communication means between AMC and NM are working.

It means that:

- The contingency does not impact the AIRAC CACD Database preparation (static data) but only the dynamic updates of CACD by the national AUP and the EAUP preparation/distribution,
- The CIAM/local ASM tool is **not available** for the AMC but other means of communication with CADF are available (e.g. telephone or email), and
- CIAM is available for CADF

In the situation described above, the following procedures (also valid in case of unavailability of B2B service) shall be applied:

B.1.1 ACTION BY THE AMC

a. The AMC:

1. sends the relevant AUP information to CADF by other means (message or file in ACA format, via email), or
2. asks CADF to implement the AMC-AUP contingency template (ASM-NM Agreement- Annex C and/or file in ACA format)

b. If none of the information described in a) above is available, informs CADF if there is a NOTAM published with the AUP content on the non-availability of CDR1/ATS routes and/or the activation of RSAs and their associated restrictions, for CADF to create an AUP with the NOTAM information on behalf of the AMC, or

c. Requests CADF to issue a NIL AUP[9].

B.1.2 ACTION BY CADF:

a. CADF will create manually in CIAM (see MANUAL PROCEDURE at point B.3) an AUP on behalf of the AMC with the information on non-availability of CDR1/ATS routes and/or activation of RSAs and their associated restrictions:

1. received by other means (e.g. ACA format via email), or
2. published by NOTAM **if so informed**, or

[9] A "NIL AUP" means that the CACD data will not be modified (e.g. all active NAM are automatically published in the EAUP/EUUP and will remain published in case of NIL AUP).

3. from the AMC-AUP contingency template (ASM-NM Agreement-Annex C) **if so requested**

b. In case of **discrepancy**[10] between the information received and CACD, if communication is possible with AMC, CADF will verify the information with the AMC and proceed accordingly.
c. In case of **discrepancy** between the information received and CACD and **no communication** possible with the AMC, CADF will apply the DISCREPANCY PROCEDURE (B.3bis).
d. If no AUP is received, no AMC-AUP contingency template exists, no NOTAM was published and if so requested by the AMC, CADF will create a NIL AUP[11] on behalf of the AMC.

B.1.bis: The local ASM tool (authorised to provide AUP via B2B) is unserviceable at the AMC for B2B process of the AUP

If the AMC is using a local ASM tool and cannot process the AUP via B2B, CIAM can be used as back-up. If alternate utilisation of CIAM is not feasible (unserviceable or not available), case **B.1** above will apply.

B.2 NM cannot process the national AUPs into EAUP but CACD (static data) and IFPS are serviceable.

It means that:

- all is serviceable on the AMC side (CIAM or any ASM tool authorised to provide AUP via B2B)
- the unavailability of the CACD and CIAM at NM does not impact the AIRAC CACD Database preparation (static data) but only the dynamic updates of CACD by the national AUP and the EAUP preparation / distribution.

In the situation described above, the following contingency procedures shall be applied:

B.2.1 Action by CADF:

a. CADF will send an AIM and publish the information on the NOP portal[12] (if necessary, CADF will inform stakeholders by any means of communication available) to create awareness on the contingency situation and that the EAUP publication might be delayed.
b. If return to normal is expected before 2000UTC (1900UTC Summer)

1. **A delay may be expected** for EAUP publication.

[10] A discrepancy is a mismatch, an inconsistency, between the CACD definition of a CDR/ATS route or RSA and the information from a NOTAM, from the AUP/UUP received by other means than the nominal automated process or B2B or from the AMC-AUP contingency template.
[11] See note 4
[12] "Network Headlines News" section

2. If the contingency situation persists so that EAUP cannot be published at 1600UTC (1500UTC Summer), CADF will send out an AIM and publish the information on the NOP portal[13] to inform that the **EAUP publication will be delayed**

c. If it appears that the contingency situation will persist after 2000UTC (1900UTC Summer), CADF will send an AIM and publish the information on the NOP portal[14], and if necessary, inform stakeholders by any means of communication available to indicate that **no EAUP will be published.**

As soon as possible, CADF will apply **B.3** MANUAL PROCEDURE.

B.2.2 Action by the AMC:

a. If the AMC is still open when NM returns to normal, the AMC will prepare/ validate the AUP and process it normally;

b. If the AMC will not remain open until 2000UTC (1900UTC Summer), the AMC will prepare/validate the AUP and send it to CADF before closing (message or file in ACA format, via email), or request CADF to implement the NOTAM, the AMC-AUP contingency template or a NIL AUP[15], for CADF to be able to use the information received in the case the systems return to normal or for manual implementation, as applicable[16].

B.3 MANUAL PROCEDURE (applicable to both B.1 and B.2 or a combination thereof)

a. For all cases where CADF will not be able to use the nominal automated process, CADF will implement manually into CIAM or CACD the AUP information (non-availability of CDR1/ATS routes and/or the activation of RSAs and their associated restrictions) made available via:
1. email or file in ACA format (applicable for case B1 only),
2. a published NOTAM (applicable for case B1 only),
3. the AMC-AUP contingency template (ASM-NM Agreement-Annex C) (applicable for cases B1 and B2); **For case B2, in absence of AMC-AUP contingency template, a NIL AUP[17] will be applied**[18].

The manual implementation is a long and heavy process due the huge amount of data to be inserted manually by CADF into CACD. When applied, and in particular for the case B.2, the manual implementation will intervene as soon as possible and CADF will coordinate the actual progress with the relevant AMC(s) and indicate the progress of the manual implementation by AIM and on the NOP portal[19], for all stakeholders and airspace users to be informed.

b. In cases as described in a. above, the NM system cannot act as a filter and automatically notify the AMC of possible discrepancies between the information received and CACD. In

[13] See note 7
[14] See note 7
[15] See note 4
[16] In such case, AMCs shall verify as soon as possible if their input has been implemented manually by NM and act accordingly.
[17] See note 4
[18] Even during the application of this contingency procedure, States are responsible for traffic separation.
[19] See note 7

case of discrepancy detected by CIAM or CACD, if communication is possible with AMC, CADF will verify the information with the AMC and proceed accordingly.

c. In case of discrepancy between the information received and CACD and no communication possible with the AMC, CADF will apply the DISCREPANCY PROCEDURE (B.3 bis).

B.3bis DISCREPANCY PROCEDURE

a. DEFINITION[20]: A discrepancy is a mismatch, an inconsistency, between the CACD definition of a CDR/ATS route or RSA (and the associated restrictions) and the information from a NOTAM, from the AUP/UUP received by other means than the nominal automated process or B2B or from the AMC-AUP contingency template.

Based on the AUP content, the discrepancies could refer to the following elements[21]:

- For routes:
  - Route ID = wrong ID submitted (doesn't exist in CACD);
  - Between/And Points = wrong Between/And Points (doesn't exist in CACD or refers to another route);
  - MNM FL = outside the limits defined in CACD
  - MAX FL = outside limits defined in CACD
  - WEF = outside limits defined in CACD
  - TILL = outside limits defined in CACD
- For RSA
  - RSA ID = wrong ID submitted (doesn't exist in CACD);
  - FBZ ID = wrong ID submitted (doesn't exist in CACD);
  - MNM FL = outside the limits defined in CACD;
  - MAX FL = outside the limits defined in CACD;
  - WEF = outside the limits defined in CACD;
  - TILL = outside the limits defined in CACD;
  - Restrictions ID = wrong ID submitted (doesn't exist in CACD or refers to another RSA)

[20] *Explanatory note: the nominal automated CIAM/B2B process would normally reject a non-conform AUP and automatically notify any discrepancy with CACD to the AMC. This "discrepancy" procedure is relevant for any contingency case where:*

- *The AUP is transmitted by other means than the nominal automated CIAM/B2B process and therefore the AUP content is not automatically rejected in case of discrepancy,*
- *A discrepancy is detected against CACD while attempting a manual update, directly or via CIAM*
- *No contact at all is possible between CADF and the AMC to solve the discrepancy*

[21] FIR/UIR are defined by the NM system automatically

- NPZ wrong ID submitted (doesn't exist in CACD);

b. ACTIONS:

If, for any reason, there is a discrepancy between the AUP received and implemented manually[22] by CADF (email with message or file in ACA format, or NOTAM) or the AMC-AUP contingency template[23] and CACD, CADF shall **verify the information with the AMC and proceed accordingly**.

If there is **no contact at all with the AMC** (or the backup facility, or FMP), the following actions will be taken by CADF:

1. If the AMC has published the AUP information in a NOTAM, this NOTAM will be implemented[24] under the State's responsibility, even if there is a discrepancy with CACD. This is valid only for the vertical and time parameters.
2. If the subject of the discrepancy is one of the flexible elements of a correct and identified CDR/RSA, like time or vertical limits activated, but not notified via NOTAM, the CACD will be kept as the reference and applied as it is.
3. If the subject of the discrepancy is a non-existing RSA ID, or FBZ ID or Restriction ID or a mismatch between the activated RSA and the Restriction ID, NM will "sterilize" (activate) all flexible structures to implement the safest possible option and notify that by AIM and by publishing the information on the NOP portal[25].
4. For the cases where the CDR/ATS route IDs concerned by the discrepancy cannot be ascertained, NM will "sterilize" all CDRs (make all CDRs unavailable) and all ATS routes crossing an RSA[26] (make all ATS routes crossing an RSA unavailable) to implement the safest possible option and notify that by AIM and by publishing the information on the NOP portal[27].
5. If the subject of the discrepancy is a non-existing NPZ ID, NM will activate all the NPZs from the concerned AMC AoR, and notify that by AIM and by publishing the information on the NOP portal[28].
6. CADF will send a specific AIM to explain to airspace users the measures applied for the State concerned and their justification and will publish the information on the NOP portal[29].

B.4 CACD serviceable at NM, but IFPS cannot be updated with EAUP/EUUP information

a. CADF will receive an alerting message from CSO about the failure of CACD to pass EAUP/EUUP information to IFPS for validation of FPL;

[22] Applicable for case B1 only
[23] Applicable for cases B1 and B2
[24] Applicable for case B1 only
[25] See note 7
[26] In case of contingency, ATS routes that are not crossing an RSA shall not be made unavailable by AUP
[27] See note 7
[28] See note 7
[29] See note 7

b. CADF will inform AMCs of the situation and actions executed. AMCs will inform local FMPs/Coordinators of the situation (risk of potential flights accepted on);

c. FMPs/Coordinators will evaluate the need to ask for regulations;

d. NM will send an AIM and publish the information on the NOP portal[30] as soon as possible to inform stakeholders and create awareness on the situation and the impossibility for IFPS to process EAUP/EUUP data.

B.5 Complete outage of AMC

a. The AMC will decide/contact the alternate AMC facility to take over all AMC tasks;

b. If no alternate AMC facility exists[31], the AMC will try to contact CADF:

1. If communication is possible, the AMC will ask CADF:

- to implement the AUP published in a NOTAM
- to implement the contingency measures described in Annex C of the ASM-NM Agreement, (and AMC-AUP contingency template when applicable), or
- any other specific measures, including NIL AUP[32].

2. if communication is not possible, CADF will implement the contingency measures described in Annex C of the ASM-NM Agreement (and AMC-AUP contingency template when applicable).

c. If there is no NOTAM and no ASM-NM Agreement, and no contact possible with the AMC, CADF will close all flexible structures (as described above in points 3, 4 and 5 of “b.actions” in the DISCREPANCY PROCEDURE (B.3 bis)).

d. CADF will send a specific AIM to explain to airspace users the measures applied for the State concerned and their justification, and will publish the information on the NOP portal[33].

Note: In those cases when the failures described in the contingency procedures occur after the EAUP publication, the following needs to be considered:

- For the release of an airspace that had been booked, the procedure is to be considered as non-blocking and is therefore not eligible among the contingency procedures. The additional availability of airspace will be treated tactically by ATCOs.
- For the additional non-availability of CDR1/ATS routes and/or RSAs activation notified by local AMCs (UUP format or NOTAM via email/fax as well as information of published NOTAM via email), CADF will create a UUP on behalf of the AMC (“Procedure 3”), or will introduce the information in CACD, according to the procedures described in the previous paragraphs.

[30] See note 7
[31] It implies that NO local actor, e.g. FMP, is in the position to replace the AMC
[32] See note 4
[33] See note 7

Contacts

NM CADF and AMC contacts are published in SharePoint https://eurocontrol.sharepoint.com/sites/comm-ASM-SG under the item: CADF – AMC Operational documents

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)
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
NPZ	Non-standard flight planning zone
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

This Information is classified as TLP: WHITE



SUPPORTING
EUROPEAN
AVIATION

© EUROCONTROL - November 2024

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