

<b>NMD</b>		<b>EUROCONTROL</b>
Document Title:  <b>Evaluation of AUP/UUP via B2B with AMC Estonia</b>		Document Reference:  EXTERNAL EVALUATIONS\B2B evaluations\Draft

## Scenario\_1 part A – Normal operation scenario 23/09/2015

### SC\_1-PartA: Check DRAFT/ READY status, AUP change capability

#### Objectives covered

- B2B-AUP-Obj\_1.2 Correct data structure
- B2B-AUP-Obj\_1.3 Completeness of information
- B2B-AUP-Obj\_1.4 Correct data implemented in CACD
- B2B-AUP-Obj\_2.1 Completeness of client updates
- B2B-AUP-Obj\_3.1 AUP Timeline compliance
- B2B-AUP-Obj\_3.2 AUP state

#### Context:

- Date in the scenario: **23.09.2015** (actual date and time)
- Prepare an AUP valid from WEF 24.09.2015 6:00 to UNT 25.09.2015 6:00
- A modification in the route structure has been made by NM on the AIRAC 404, so as to highlight changes and test the AIRAC switch. => **not tested anymore, see section 2.2.**

#### Operational instruction

1. AMC: Set up an AUP in INTENT status  
The AUP contained RSA EETSA1 from 14:50 to 17:50, associated CDR 1 on route L870 and Y267
2. AMC: Wait for the check 1:
3. AMC: Set the AUP to DRAFT
4. AMC: Wait for check 2-3 by NM
5. AMC: Set the AUP to READY
6. AMC: Wait for check 4 by NM
7. AMC: Set to DRAFT again and make some modification: **change the planning from 12:50 to 17:50**
8. Set the status to READY
9. NM Publish the AUP

#### Expected results Items to be checked

1. NM: Check that in INTENT state, nothing is seen in NM systems => **OK**
2. NM: Check the DRAFT is visible => **OK**
3. NM: Check all the AUP matches the AMC request  
(in terms of requested RSA, CDR, and associated planning) => **OK**
4. NM: check the status READY => **OK**
5. Check the updates done on the AUP => **OK**
6. AMC check the AUP is published => **OK**
7. NM: Inform AMC the Test is complete and that they can delete the AUP

#### Findings/observation

All checks were positives.

No performance issues were identified. Once AMC Estonia issues their AUP, it is visible on NM systems within a couple of second.

#### Conclusion / way forward

All objectives associated to this scenario are validated in the case of AUP creation/update.

<b>NMD</b>		<b>EUROCONTROL</b>
Document Title:  <b>Evaluation of AUP/UUP via B2B with AMC Estonia</b>		Document Reference:  EXTERNAL EVALUATIONS\B2B evaluations\Draft

## Scenario\_1 PartB: UUP change capability

### SC\_1-PartB: UUP change capability

#### Objectives covered

- B2B-AUP-Obj\_1.2 Correct data structure
- B2B-AUP-Obj\_1.3 Completeness of information
- B2B-AUP-Obj\_2.1 Completeness of client updates
- B2B-AUP-Obj\_3.3 UUP schedule compliance
- B2B-AUP-Obj\_3.4 UUP Timeline compliance
- B2B-AUP-Obj\_4 Adequate System performance

#### Context:

- Date in the scenario : 23.09.2015, 09:00 Brussels LMT
- Two **AUPs released** for 2 consecutive days: ( checked SAT/X CIAM and SAT/X CIAM )
  - The AUP prepared during SC2-PartA (Valid WEF 24/09/2015 06:00 - Valid TIL 25/09/2015 06:00) is still valid
  - New NIL AUP was prepared before the beginning of this scenario for the next day and sent to NM Valid WEF 23/09/2015 06:00 - Valid TIL 24/09/2015 06:00)
- The scenario intended to simulate the period between 16:00 and 21:00 when it is possible to do UUPs on the current day and UUP-6 for the next day.
- According to the time of the scenario, CADF sets up a UUP-12 release time for the current day and a UUP-6 release time for the next day.

#### Operational instruction

1. AMC: Set an UUP for the current day (UUP-12)
2. AMC: Wait for check 1 by NM
3. AMC: Set an UUP for the next day (UUP-6)
4. AMC: Wait for check 2 by NM

#### Expected results

##### Items to be checked

1. NM: Check the UUP matches the AMC request ( in terms of wanted CDR, RSA and planning) =>OK
2. NM: Check the UUP matches the AMC request ( in terms of wanted CDR, RSA and planning) => Non OK
3. Check the system performance (Obj\_4). Check the UUP arrives in a timely manner. =>OK
4. NM: Inform AMC the test is complete and that they can delete the AUP

<b>NMD</b>	<b>EUROCONTROL</b>
Document Title:  <b>Evaluation of AUP/UUP via B2B with AMC Estonia</b>	Document Reference:  EXTERNAL EVALUATIONS\B2B evaluations\Draft

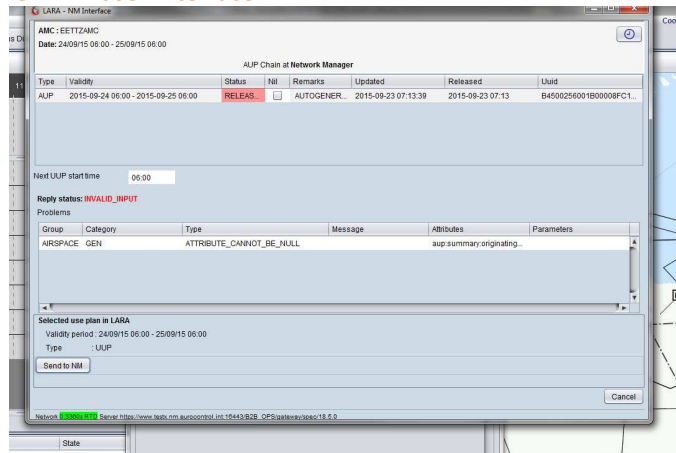
### Findings/observation

- AMC Estonia tries several times to make a UUP-6 valid from 24<sup>th</sup> to 25<sup>th</sup>  
=> error reported in the LARA log and on CUA log



1.extract-7.15UTC-UUPOn24-25.txt

=> And on the LARA user interface



- AMC Estonia managed to release a UUP-12 valid from 23rd to 24th => successful as reported in the log  
=> see extract of the log below.
- No performance issues were identified. Once AMC Estonia issues their UUP, it is visible on NM systems within a couple of second

### Analysis

#### Technical viewpoint

In the UUP-6 for 24<sup>th</sup> to 25<sup>th</sup>, the B2B request generated by LARA misses the <originatingAupId>, while it is requested by B2B constraints (see below an extract of the B2B documentation)

#### originatingAupId

AUPId originatingAupId

Unique id of the originating AUP.

It must be the value of the use plan this UUP is based on.

Presence: Optional

Constraints:

1. See ORIGINATING\_AUP\_ID\_CANNOT\_BE\_NULL\_IF\_UUP\_WRITE
2. See ORIGINATING\_AUP\_ID\_MUST\_BE\_NULL\_IF\_AUP\_WRITE

#### ORIGINATING\_AUP\_ID\_CANNOT\_BE\_NULL\_IF\_UUP\_WRITE

Attribute: originatingAupId

Context: AUPCreationRequest, AUPValidationRequest, AUPUpdateRequest

Description:

Cannot be null when it is an UUP.

- After investigation by LARA team, LARA would have in fact accepted a UUP as from 06:01 and not from 06:00.

<b>NMD</b>		<b>EUROCONTROL</b>
Document Title:	Document Reference:	
<b>Evaluation of AUP/UUP via B2B with AMC Estonia</b>	EXTERNAL EVALUATIONS\B2B evaluations\Draft	

**Conclusion / way forward**

- Objectives validated for the UUPs on the current day validated.
- A patch with correction will be issued so as to be able to issue UUP for the next day at 06:00 sharp (and other time clock sharp).




**Actions**

For LARA team to

- Correct the bug [See Validation after "UUP bug" correction](#)
- Provide evidence of correction
- Provide Estonia AMC with a patch that includes the bug correction.

<b>NMD</b>		<b>EUROCONTROL</b>
Document Title:  <b>Evaluation of AUP/UUP via B2B with AMC Estonia</b>		Document Reference:  EXTERNAL EVALUATIONS\B2B evaluations\Draft

## Validation of the “UUP bug” correction

<p><b>Findings/observation</b></p> <div style="text-align: center;">   Invalid_UUP_Exchange.xml </div> <div style="text-align: center;">   valid_UUP_Exchange.xml </div> <div style="text-align: center;">   RE EST AMC LARA-NM - STATUS o </div> <ul style="list-style-type: none"> <li>• After applying the patch, it accepts to create the UUP in draft as from 6.00 sharp.</li> </ul>
<p><b>Analysis</b></p> <p>-</p>
<p><b>Conclusion / way forward</b></p> <ul style="list-style-type: none"> <li>• Objectives validated for the UUPs on the next day.</li> </ul>

<b>NMD</b>	<b>EUROCONTROL</b>
Document Title:  <b>Evaluation of AUP/UUP via B2B with AMC Estonia</b>	Document Reference:  EXTERNAL EVALUATIONS\B2B evaluations\Draft

## Scenario\_2: Check error management

### SC\_2: Check error management

#### Objectives covered

- B2B-AUP-Obj\_5 Management of error and detection
- B2B-AUP-Obj\_6 Error recovery

#### Operational instruction

##### Executed by

1. AMC: Set up an AUP in DRAFT containing an RSA with some overlap in the schedule.
2. Set the AUP in READY state.
3. Wait for check 1.
4. Correct the schedule of the AUP.
5. If the tool allows, AMC: Set up an AUP in Draft containing an RSA in the past.

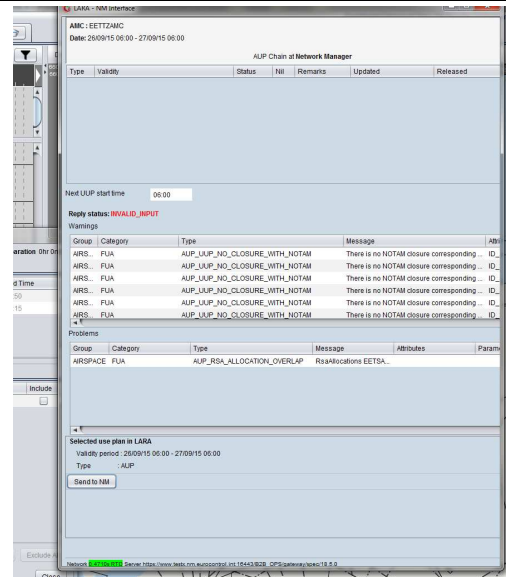
#### Expected results

##### Items to be checked

1. NM and AMC checks the response from the system
2. NM: Inform AMC the Test is complete and that they can delete the AUP

#### Findings/observation

- AMC Estonia tried to send an RSA with a planning containing some overlaps. The action was rejected by the software.
- Then, AMC Estonia does actually see the error on the graphical interface and is able to easily notice it and correct it (modify the AUP).



#### Analysis

The software (B2B constraint) prevents LARA to send to NM systems an erroneous schedule with overlaps: it rejects the AUP creation request.

```
<status>INVALID_INPUT</status>
  <inputValidationErrors>
    <attributes/>
    <group>AIRSPACE</group>
    <category>FUA</category>
    <type>AUP_RSA_ALLOCATION_OVERLAP</type>
    <parameters/>
    <message>RsaAllocations EETSA2 must not overlap in applicability period or flRange with RsaAllocation EETSA2</message>
  </inputValidationErrors>
```

#### Conclusion / way forward

B2B-AUP-Obj\_5 and B2B-AUP-Obj\_6 validated.

<b>NMD</b>		<b>EUROCONTROL</b>
Document Title:  <b>Evaluation of AUP/UUP via B2B with AMC Estonia</b>		Document Reference:  EXTERNAL EVALUATIONS\B2B evaluations\Draft

### Scenario 3 Check FBZ management

SC_3: Check FBZ management
<p><b>Objectives covered</b></p> <ul style="list-style-type: none"> <li>• B2B-AUP-Obj_1.2 Consistent data structure</li> <li>• B2B-AUP-Obj_1.2 Correct data structure</li> <li>• B2B-AUP-Obj_1.3 Completeness of information</li> <li>• B2B-AUP-Obj_1.4 Correct data implemented in CACD</li> </ul>
<p><b>Context:</b></p> <ul style="list-style-type: none"> <li>• Date in the scenario 22.10.2015, 11.00 Brussels LMT</li> <li>• FBZ (FPL Buffer Zone) are airspaces with one or several FUA restrictions associated. At least one FUA restriction must be associated to each FBZ selected in an AUP. Each FBZ may have default restriction(s) associated.</li> <li>• As validated with AMC Estonia, the following behaviour is expected: the default restrictions associated to the FBZ are automatically included in the AUP upon the selection of the FBZ airspace.</li> <li>• Prepare an AUP (Valid WEF 23/10/2015 06:00 - Valid TIL 24/10/2015 06:00) that contains all the FBZ airspaces under the responsibility of AMC Estonia. <ul style="list-style-type: none"> <li>• TSA1Z</li> <li>• TSA2Z</li> <li>• TSA4Z</li> <li>• TSA7Z</li> </ul> </li> </ul>
<p><b>Operational instruction</b></p> <ol style="list-style-type: none"> <li>1. AMC: Set up the AUP in INTENT status containing the FBZs</li> <li>2. AMC: Set the AUP to DRAFT</li> <li>3. AMC: Wait for check 2-3 by NM</li> <li>4. AMC: Set the AUP to READY</li> <li>5. AMC: Wait for check 4 by NM</li> <li>6. NM Publish the AUP</li> </ol>
<p><b>Expected results</b></p> <p><b>Items to be checked</b></p> <ol style="list-style-type: none"> <li>1. NM: Check all the AUP matches the AMC request (in terms of requested FBZ, and associated planning =&gt; <b>OK</b>)</li> <li>2. NM: check the status READY=&gt; <b>OK</b></li> <li>3. NM: Inform AMC the Test is complete and that they can delete the AUP</li> </ol>
<p><b>Findings/observation</b></p> <ul style="list-style-type: none"> <li>• As showed on the print screen taken during the OPT, the expected -behaviour is observed:</li> <li>• The default restrictions associated to the FBZ are automatically included in the AUP upon the selection of the FBZ airspace.</li> </ul>

<b>NMD</b>	<b>EUROCONTROL</b>
Document Title:  <b>Evaluation of AUP/UUP via B2B with AMC Estonia</b>	Document Reference:  EXTERNAL EVALUATIONS\B2B evaluations\Draft

- AUP 23/10-24/10 – TSA1Z TSA2Z TSA4Z TSA7Z on LARA client side and on CHMI (CIAM) :

The screenshot shows the XML configuration for an AUP (Airspace User Profile) in Notepad++. The XML includes elements like `<airxm:airspace>`, `<airxm:airspaceTimeSlice>`, `<airxm:airspaceLayer>`, and `<airxm:airspaceActivationExtension>`. The LARA - NM Interface window is open, showing the AUP Chain at Network Manager with columns for Type, Validity, Status, NI, Remarks, Updated, Released, and Uuid. A 'Current plan at NM valid for 23/10/15 06:00 - 24/10/15 06:00' dialog box is also visible, displaying a table of area names and their flight levels and times.

Area Name	Lower FL	Upper FL	Start Time	End Time
EETS3A1	050	UNL	09:00	10:00
EETS3A2	095	270	09:00	10:00
EETS3A4	095	275	11:00	12:00
EETS3A7	095	245	09:00	10:00

The screenshot shows the CHMI - Optcadfl / CADF Role (fided\_cadf\_prfl) / SATX.Ciam (CHMI) interface. The main window displays 'View AUP for EETTAMC at 22/10/2015 09:27'. The status is 'READY' and the remark is 'AUTOGENERATED FROM LARA'. Below this, there are sections for 'RSAs' (4 RSAs), 'FLUA Restrictions' (1 RS Id), and 'CDRs' (0 CDRs). The RSAs table lists various flight levels and times for different TSA categories.

CAT	Lvl1	Lvl2	RSA Id	MIN FL	MAX FL	1 WEF	2 TIL	FUA RS	Resp Unit	FIR/UIR	Remark	Confirmed
AMA			EETS3A2	050	UNL	09:00	10:00					
AMA			EETS3A2	095	270	09:00	10:00					
AMA			EETS3A7Z	095	245	09:00	10:00					
AMA			EETS3A4Z	095	275	11:00	12:00					



<b>NMD</b>	<b>EUROCONTROL</b>
Document Title:  <b>Evaluation of AUP/UUP via B2B with AMC Estonia</b>	Document Reference:  EXTERNAL EVALUATIONS\B2B evaluations\Draft

- AUP 26/10-27/10 TSA7Z,TSA8,TSA9 – all with restriction on LARA client and on CHMI

The screenshot shows the LARA - NM Interface with an XML configuration for an AUP Chain of Network Manager. The configuration includes details for the AUP (2015-10-26 06:00 - 2015-10-27 06:00), its status (DRAFT), and its generation (AUTOGENER). A dialog box displays the current plan for the period 26/10/15 06:00 to 27/10/15 06:00, listing areas like EETS97, EETS98, and EETS99 with their respective Lower FL, Upper FL, Start Time, and End Time.

The screenshot shows the CHMI - Optcadf1 / CADF Role(tdod\_cadf\_prf1) / SATX.Gam (CHMI) interface. It displays the AUP for EETTZAMC, valid from 26/10/2015 06:00 until 27/10/2015 06:00. The status is DRAFT and it is AUTOGENERATED FROM LARA. The interface includes sections for RSAs (3 RSAs), FUA Restrictions (1 RS Id), and CDRs (0 CDRs).

CAT	Lvl1	Lvl2	RSA Id	MIN FL	MAX FL	.1 WEF	.2 TIL	FUA RS	Resp Unit	FIR/UIR	Remark	Confirmed
AMA			EETS97	295	295	09:00	10:00					●
AMA			EETS98	270	330	09:00	10:00					●
AMA			EETS99	295	275	09:00	10:00					●

.1 RS Id	Remark	Confirmed
EETS7Z	EETS7Z ACTIVATIONS SEE NOT/ALP/ALP	●
EETS8R	EETS8R ACTIVATIONS SEE NOT/ALP/ALP	●
EETS9R	EETS9R ACTIVATIONS SEE NOT/ALP/ALP	●

Document Title:

Document Reference:

Evaluation of AUP/UUP via B2B with AMC Estonia

EXTERNAL EVALUATIONS\B2B evaluations\Draft

- AUP 28/10 – 29/10 TSA 1, 14, 2, 4, 5, 6, 7, 8, 9 with CDR expansion on LARA client and CHMI

The screenshot displays the LARA - NM Interface. On the left, the 'Airspace Planning Display' shows a grid of flight paths for various EETSAs (EETS1 to EETS9) with their respective start and end times. The main window shows the 'AUP Chain at Network Manager' for 'AMC:EETTZAMC' on 28/10/15. A table lists the AUP details, including Type (AUP), Validity (2015-10-28 06:00 - 2015-10-29 06:00), Status (DRAFT), and Remarks (AUTOGENERATED). A 'Next UUP start time' is set to NONE. A 'Reply status: OK' message is visible. A 'Validity period' dialog box is open, showing the current plan is valid for 28/10/15 06:00 - 29/10/15 06:00. Below this, a table lists 'Area Name' and 'Portion Name' with their respective Lower FL, Upper FL, Start Time, and End Time. A map of Europe is visible on the right side of the interface.

The screenshot shows the 'View AUP for EETTZAMC at 23/10/2015 06:41' window. The status is 'DRAFT' and the remark is 'AUTOGENERATED FROM LARA'. The window is divided into several sections:

- RSAs:** A table with columns for CAT, Lvl1, Lvl2, RSA Id, MNM FL, MAX FL, 1 WEF, 2 TIL, FUA RS, Resp Unit, FIR/JUR, Remark, and Confirmed. It lists 9 RSAs for various EETSAs.
- FUA Restrictions:** A table with columns for 1 RS Id and Remark. It lists restrictions for various EETSAs, such as 'EETS12Z ACTIVATIONS SEE NOT/ALP/AUP'.
- ATS:** A table with columns for EXCL, Type, 1 Route Id, From Point, To Point, MNM FL, MAX FL, 1 WEF, 2 TIL, 3 TIL, FIR/JUR, RSA Id, Remark, and Confirmed. It lists 58 CDRs for various routes and points.

<b>NMD</b>		<b>EUROCONTROL</b>
Document Title:  <b>Evaluation of AUP/UUP via B2B with AMC Estonia</b>		Document Reference:  EXTERNAL EVALUATIONS\B2B evaluations\Draft

**Analysis**

-

**Conclusion / way forward**

The software behaviour and capability regarding the management of FBZ comply with what has been agreed with AMC Estonia.

<b>NMD</b>		<b>EUROCONTROL</b>
Document Title:  <b>Evaluation of AUP/UUP via B2B with AMC Estonia</b>		Document Reference:  EXTERNAL EVALUATIONS\B2B evaluations\Draft

## Scenario 4: check FBZ Handling with missing or wrong restriction

SC_4: Check FBZ Handling with missing or wrong restriction
<p><b>Objectives covered</b></p> <ul style="list-style-type: none"> <li>• B2B-AUP-Obj_5 Management of error and detection</li> <li>• B2B-AUP-Obj_6 Error recovery</li> </ul>
<p><b>Context:</b></p> <ul style="list-style-type: none"> <li>• Date in the scenario 22.10.2015, 11.00 Brussels LMT</li> <li>• FBZ (FPL Buffer Zone) are airspaces with one or several FUA restrictions associated. At least one FUA restriction must be associated to each FBZ selected in an AUP. Each FBZ has a selection of default restriction associated.</li> <li>• As validated with AMC Estonia, the following behaviour is expected: the default restrictions associated to the FBZ are automatically included in the AUP upon the selection of the FBZ airspace.</li> <li>• Prepare an AUP (e.g. Valid WEF 27/10/2015 06:00 - Valid TIL 28/10/2015 06:00) that <ul style="list-style-type: none"> <li>• Does not contain any restrictions</li> <li>• Contains default restrictions that does not match the CACD default ones</li> </ul> </li> </ul>
<p><b>Operational instruction</b></p> <ol style="list-style-type: none"> <li>4. AMC: Set up the AUP in INTENT status containing the FBZ</li> <li>5. AMC: Set the AUP to DRAFT</li> <li>6. AMC: Wait for check 2-3 by NM</li> <li>7. AMC: Set the AUP to READY</li> <li>8. AMC: Wait for check 4 by NM</li> <li>9. NM Publish the AUP</li> </ol>
<p><b>Expected results</b></p> <p><b>Items to be checked</b></p> <ol style="list-style-type: none"> <li>10. NM and AMC checks the response from the system ( appropriate message from B2B : INVALID_INPUT / AUP_FBZ_ALLOCATION_MUST HAVE FUA ALLOCATION</li> <li>11. NM: Inform AMC the Test is complete and that they can delete the AUP</li> <li>12.</li> </ol>
<p><b>Findings/observation</b></p> <ul style="list-style-type: none"> <li>• As showed on the print screen taken during the OPT, the expected -behaviour is observed: The B2B error message are correctly reported and indicate to the operator the source of the error is related to the restriction associated to the FBZ</li> </ul>

<b>NMD</b>	<b>EUROCONTROL</b>
Document Title:  <b>Evaluation of AUP/UUP via B2B with AMC Estonia</b>	Document Reference:  EXTERNAL EVALUATIONS\B2B evaluations\Draft

The screenshot displays the LARA - NM Interface. On the left, the 'Airspace Planning Display' shows a timeline for Tuesday, 27 Oct 2015, with various flight information (EETSAs) and their vertical profiles. The main window shows the 'AUP Chain at Network Manager' for AMC: EETT2AMC, dated 27/10/15 06:00 - 28/10/15 06:00. It lists several warnings and problems:

- Warnings:**
  - Group: AIRSPACE, Category: FUA, Type: AUP\_RSA\_ALLOCATIONS\_OVERLAP, Message: RSA allocation EETS42Z overlaps in applicability period (09:00 - 10:00) with RSA allocation EETS49 and RSAs are geometrically overlapping (095 - 195)
- Problems:**
  - Group: AIRSPACE, Category: FUA, Type: AUP\_FBZ\_ALLOCATION\_MUST\_HAVE\_FUA\_ALLOCATION, Message: FBZ allocation EETS47Z must have at least one activated FUA Restriction, Attributes: ID\_0\_2\_1

Below the warnings, it shows the 'Selected use plan in LARA' with validity period 27/10/15 06:00 - 28/10/15 06:00 and Type: AUP. A map of the region is visible at the bottom right.

**Analysis**

-

**Conclusion / way forward**

The software behaviour and capability regarding the management of FBZ comply with what has been agreed with AMC Estonia.