

NM22.0 OPT INSTRUCTIONS

-NM OPT session planned 09 March 2018 – 26th April 2018

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This document provides instructions to external users for participating to the NM22.0 OPT (Operational Testing) session.			
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1 Introduction

- (1) This Test Plan defines the purpose, scope, procedures and schedule of activities for the Operational Testing (OPT) of new software release of NM 22.0.
- (2) The intended audience of this Test Plan is all EUR region States, Airports, Aircraft Operators and all other ANSPs, Regions and Organisations.
- (3) The testing activities described in this document are intended to address the software changes introduced within the NM 22.0 release.
- (4) This document describes only the testing activities involving external participation where stakeholders are encouraged to participate. It does not include the various NM internal testing activities i.e. Acceptance Testing, Regression Testing and Integration Testing.
- (5) The Operational Testing described in this document will permit participants to evaluate the impact of the modifications on their procedures and systems.
- (6) The content for NM22.0 can be found in the NM Release notes which are published on the EUROCONTROL website:
<http://www.eurocontrol.int/sites/default/files/content/documents/nm/network-operations/release-deployment/nm-release-notes-next.pdf?nocache2018-1.0>
- (7) The presentation to Externals of NM22.0 (slides and recording) will be available at:
http://www.eurocontrol.int/lists/publications/network-operations-library?title=&field_term_publication_type_tid=252&year%5bvalue%5d%5byear
- (8) OPT session will take place from the 09/03/2018 08:00 UTC to the 26/04/2018 15:00 UTC.
- (9) The platform will be available 7/7 but assistance only during week days.

2 Objectives

2.1 General Objectives

- (1) The overall objectives of NM 22.0 OPT testing are to:
 - a) *Demonstrate the new software functionality;*
 - b) *Enable the new functionality to be tested against client systems;*
 - c) *Enable knowledge to be gained of new procedures;*
 - d) *Enable familiarisation of client staff and NM staff with the new functionality.*

2.2 Main Functional Objectives

- (1) Demonstrate the ability of IFPS to correctly validate messages against the new NM software updates.
- (2) Demonstrate the ability of flight plan originators to create / validate flight plan and associated messages.
- (3) Demonstrate the ability of ATC units to accept messages received from NM22.0 software.

3 New functionalities

- (1) This section lists new functionality included in the NM 22.0 release for NM Systems that may be of interest to external users where they may feel the need to perform validation. For full scope of all functional requirements for each item impacting Externals, please consult the NM Release Notes.
- (2) Tests of these functionalities will be executed on the standalone SAT (System Acceptance Testing) test platform. They will not be executed on the NM operational platform.

3.2 Functional Blocks

3.2.1 FB723: Rolling AUP

- (1) AMCs shall be able to publish AUPs in DRAFT status from D-6, when information are available, until the current AUP at D-1, which remains the last publication to provide a consolidated set of airspace information at network level (EAUP). Normally AUPs are prepared in DRAFT until 15 days in advance and promoted by AMCs in READY at D-1. Currently, such information are not shared with airspace users. With Rolling AUP, at least 6 days in advance, the airspace users could be aware, although not for FPL purposes yet, of stable information that could be used to improve their planning operations.
- (2) Impacts on systems:
 - CIAM: allow the early publication of draft AUP messages.
 - NOP Portal: publish rolling AUP data.
 - Publish rolling AUP data and notify AOs of the availability of such information.
 - ASM Local Tools: being able to manage draft AUPs messages from D-6.
 - NM Web Services: being able to process Draft AUP messages from D-6 sent by ASM tools
 - Impact on AMC procedures: AMCs will have to adapt their procedures if they want to be able to publish their national AUPs in draft up to 6 days in advance with all possible information available.
 - Impact for external users:**
 - Impact on procedures.
 - Impact on Man-Machine interface.
 - Impact on clients' systems.

3.2.2 FB833: PTR Counts - SKIPIN/SKIPOUT to TVs

- (1) FB833 will improve the NM systems (ETFMS) elements namely the traffic volume model with the aim of providing FMPs with:
 - higher flexibility to FMPs; several TVs with the same reference location can have different skip-in/skip-out values,
 - the flights airspace profile will no longer present holes/gaps and or overlaps, which is source of reports/questioning from the users,
 - users can see all the flights penetrating an airspace (querying the flights in an

airspace will return all flights even if they are just clipping the airspace),
• IFPS and ETFMS brought closer regarding the Airspace profile, as IFPS is not using skip-in/skip-out parameters in support of FPL distribution service.

Impact for external users:

- Impact on clients' systems.

3.2.3 FB890: API Developments

- (1) Operational objectives of the FB are the following: • Integrate Flight arrival information into the NOP. • Adapt NM traffic demand trajectories with received arrival information. • Enhance ATFCM arrival measures with local ANSP/Airport priorities and targets.
- (2) The changes will NOT be generally available to the external users. Access to the new capabilities will be strictly managed and following successful certification will be available to the participants of SES H2020 projects namely: PJ24, PJ25 and the CEF2015 AF4 project. The usage of the capabilities will be during periods that will be announced by those projects in consultation with the relevant NM stakeholder group fora.
- (3) For PJs' participants: I3. Impact on clients' systems.
For PJs' non-participants: FB will have limited impact; FB's enhancement will generally manifest as:
 1. Improvements to NM's traffic demand counts.
 2. Improvements compared to traditional ATFCM arrival regulations.
 3. Changes in Operational Logs

Impact for external users:

- Impact on clients' systems.

3.2.4 FB906: Flight Planning Domain improvements

- (1) Enhance the NM Flight Planning Service (IFPS)
- (2) CR_040039: Suppress Copy REJ ORMs to AOA for RQP messages
- (3) When ATC send an incorrect RQP message to IFPS that is rejected, the Aircraft Operator may receive a copy of the Reject Operational Reply Message. The change is requested following an Aircraft Operator complaint that the amount of -TITLE REJ for RQP messages received cause confusion and workload issues.
- (4) CR_041608: Change SEQPT default for APL
- (5) Because the standard surveillance equipment on commercial aircraft includes Mode_S, some ANSPs have problems when IFPS uses 'C' as the default surveillance equipment in the -SEQPT field (10b) of APL messages. During the AFP Workshop in May 2016, NM stakeholders asked that the default is changed to 'S'.
- (6) CR_040806: Enhancement of the POSRTE field in IFPS REJ messages

- (7) To give the Airspace User's more information on the usefulness of the POSRTE field, it will include a difference indicator for the distance (expressed in +/- NM and +/- %).
- (8) The difference indicator can be either 'PLUS' or 'MINUS', with a NM value and a percentage (PC) value. Example:

```
-POSRTE N0450F400 TOR P601 BAVTA N873 TUSKA UN873 JUIST  
UP174 EEL UN872 PAM/N0450F410 UN872 DENOX UZ319  
MOFIL/N0390F250: DIFF LENGTH PLUS 39NM 4PC
```
- (9) ATC systems that receive APL messages from IFPS may be impacted by the change of the default for the surveillance equipment from C to S.
- (10) Client systems that receive REJ messages from IFPS may be impacted by the change to the format of the POSRTE field in the message (AFTN/SITA/B2B).

3.2.5 FB916: Scenario Repository Publication via B2B

- (1) As part of the overall Scenario management process, and taking into account the increasing linking between local and network systems, the publication function presents the way ATFCM Scenario information is presented and communicated. This change reflects:
 - Improvements on the publication of ATFCM Scenario information, including TV description and suggested alternative reroutings.
 - Improvements on the calculation of reroutings as part of the Group Rerouting Tool (GRRT) functionality.
 - Revalidation process of the Scenario Reference published information, including suggested alternative reroutings, every AIRAC cycle to keep the published ATFCM scenarios up-to-date in the NOP Portal.
 - Extra attributes to the storage service to be able to analyse the effectiveness of the published ATFCM scenarios (post-ops activity).
- (2) CR_043025: Scenario Publication Improvements Minor improvements that clarify publication process.
- (3) CR_043026: Scenario revalidation: Alternative Routes still flyable Alternative routes will now also be revalidated after AIRAC updates. CR_043027: Scenario attributes revalidation During scenario validation check correctness of From/To attributes with regard to latest TV definition.
- (4) CR_043029: Scenario GRRT improvements (Note: This CR belongs to FB924 but impacts FB916 by improving rerouting feature) This CR will allow more reroutes to be generated (now only within 7 seconds); it will also improve GRRT algorithm to allow horizontal optimisation in case of vertical reroute. Preferred historical reroutes will be taken into consideration when computing reroutings.
- (5) CR_043030: Query by AO for impacting scenario New field in B2B and NOP Portal flight list that indicates 'impacted by zero rate regulation' (i.e. scenario)
- (6) In the scenario revalidation process, alternative routings need also to be checked for validity. The possibility to identify flights impacted by zero-rate regulations provides the possibility to analyse scenario effectiveness in the post-ops process. This may change analysis procedures

Impact for external users:

- Impact on Man-Machine interface.
- Impact on clients' systems.

3.2.6 FB893: NM airspace model evolution

- (1) FB893 constitutes the second wave of the CACD data model adaptations, required to allow the seamless Annex 15 data download from the EAD and future EAIMS to CACD and to allow these data to be used in the future by operational NM systems. Several changes to CACD data model have been already rolled out in NM21.5 (FB862).
- (2) FB893 is a continuation of these changes. More data model changes will be gradually rolled out over next NM releases. FB893 contains several CRs dedicated to the Aerodrome domain model changes and one CR related to Airspace domain. All changes aim to bring CACD data model closer to AIXM.
- (3) CR_040713: Aerodrome Elevation Some Aerodromes may have negative field elevation (e.g. Amsterdam EHAM -12ft). For some smaller world-wide Aerodromes field elevation may be unavailable. Currently, CACD does not accept negative Aerodrome field elevation and does not allow field elevation to be blank, in case if Aerodrome elevation is unknown. This CR implementation changes some business rules in CACD to allow negative Aerodrome field elevation to be stored in CACD and also to accept blank field elevation. This change does not impact operational NM systems and does not impact clients' systems. CACD will output negative and blank field elevation values converted to 0.
- (4) CR_040563: Business rules adaptation for world-wide AD data This CR changes several business rules in CACD to facilitate seamless world-wide AD data consumption from the EAD.
 - In CACD all heliports had been characterised by a unique Runway of type 'Heli' before implementation of the CR_041043 in NM21.5, which introduced Aerodrome type not be stored as a separated property. Runway of type 'Heli' is redundant and will be removed.
 - Today in CACD taxi times for all Aerodromes outside ENV_EXTR area are set to 10 minutes for small ADs and to 20 minutes for international ADs. Business rule relaxation will allow taxi times to be blank if unknown, avoiding keeping fictitious values.
 - Currently, Aerodromes outside of ENV_EXTR area must not have associated SIDs and STARs. This business rule will be removed to allow SIDs and STARs outside of ENV_EXTR area to be kept in CACD.
 - Today CACD does not allow storing of runway directions for the Aerodromes outside of ENV_EXTR (ENV Extraction) area. Business rules will be removed to allow Runway directions for alien Aerodromes (i.e. Aerodromes outside the ENV_EXTR area). Definition of the ENV_EXTR area is available at: http://www.nm.eurocontrol.int/STATIC/NM_AREA/
- (5) • This CR as a whole will not impact clients' systems. Default taxi times values will be generated for clients' systems (values will be set as before the change)
- (6) .CR_034863: Aerodrome Flight Rules (IFR/VFR) At present Aerodrome flight rules are defined as Flow Restriction both in CACD and NM operational systems. In AIXM model AD flight rules are an attribute of the AD object. To align with the AIXM and to facilitate EAD data download, AD flight rules

definition will be moved to the AD level. This attribute can have values: IFR, VFR, BOTH or OTHER. It will also have an associated time schedule, as allowed AD flight rules may change according to the schedule. This change impacts NM B2B clients: AD flight rules will be provided as an attribute of the Aerodrome, as prescribed by AIXM model, and AD flight rules will no longer be provided as a restriction.

- (7) CR_041955: Airspace Definition Alignment This change will allow the linkage of units of type FIC outside of ENV_EXTR area to their corresponding FIR or UIR. Actual FIC (Flight Information Centre) addresses outside ENV_EXTR area will remain blank until future NM releases.
- (8) Linkage will be implemented only in CACD and impacts neither NM operational systems nor clients' systems.
- (9) Next 5 CRs (from CR_040044 to CR_040048) will facilitate Aerodrome data download from the EAD. None of these 5 CRs impact clients' systems as these new attributes will not be exposed via NM B2B. CR_041044: AD property for water This CR adds a property to the Aerodromes in CACD, which would allow distinguishing water Aerodromes. CR_041045: Abandoned or closed AD This CR adds a property for the Aerodromes in CACD which are currently completely 24/7 closed.
- (10) CR_041046: Emergency only AD or AD with no facilities Some Aerodromes can be uncontrolled permanently or temporarily, according to the associated time schedule (e.g. MIL AD, which is used by an aero club on weekend). This CR adds an "uncontrolled" property to Aerodromes in CACD, along with its associated schedule.
- (11) CR_041047: Private ADs This CR adds property "private" to the Aerodromes in CACD. CR_041048: INTL/DOM ADs This CR adds a property to the Aerodromes in CACD, to allow distinguishing between international and domestic ADs. This will be derived from Customs Service availability on the AD. AD is considered as international if Customs Service is available at the AD (can be according to associated timetable or on request). This property will be optional for ADs outside of ENV_EXTR area.
- (12) Only one CR (CR_034863) included in this FB impacts clients' systems. AD flight rules and their associated applicable time schedule will be moved from flow restriction level to AD attributes level, as defined by AIXM model. External users may need to modify their systems to receive correct AD flight rules values from NM B2B services.
- (13) FB833 will have an impact on the local tools that are using the Airspace Volume profile for their local computations (from EFDs or PSFDs (B2B)). With the change in subject, EFD client applications can properly derive the collapsed sector profiles, but they will need adjusting to consider the new EFDs airspace profile that will provide the full list of ESs - no holes/no overlaps

Impact for external users:

- **Impact on clients' systems.**

3.2.7 FB924 - Rerouting Evolutions

(1) Operational objectives of the FB are the following:

- Integrate Flight arrival information into the NOP.
- Adapt NM traffic demand trajectories with received arrival information.

Enhance ATFCM arrival measures with local ANSP/Airport priorities and targets.

CR_043025: Scenario Publication Improvements

Minor improvements that clarify publication process.

CR_043026: Scenario revalidation: Alternative Routes still flyable

Alternative routes will now also be revalidated after AIRAC updates.

CR_043027: Scenario attributes revalidation

During scenario validation check correctness of From/To attributes with regard to latest TV definition.

CR_043029: Scenario GRRT improvements

(Note: This CR belongs to FB924 but impacts FB916 by improving rerouting feature)

This CR will allow more reroutes to be generated (now only within 7 seconds); it will also improve GRRT algorithm to allow horizontal optimisation in case of vertical reroute.

Preferred historical reroutes will be taken into consideration when computing reroutings.

CR_043030: Query by AO for impacting scenario

New field in B2B and NOP Portal flight list that indicates 'impacted by zero rate regulation' (i.e. scenario)

3.2.8 Isolated Change requests

CR_043606: Add in ALL_FT 60 the 3 types of RNAV equipment (ICAO field18 and field10b)

The objective of the CR is to process in ALLFT+ files correct flight trajectories using UK RAD which now specify the aircraft equipment in the flight condition field.

3.3 Testing of the CHMI

3.3.1 For NM-managed PC

- (1) No registration is required.
- (1) The CHMI will be pushed on the PC on the 27/2/2018 & 6/3/2018 22h00 UTC (standard maintenance window).
- (2) As from the 09/03/2018 (10:00 UTC - start of the OPT session), to use the CHMI-OPT, please navigate through the Windows Start menu and launch: Start->All Programs->NM Applications->OPSTEST-CHMI 14.0.4 via Extranet
- (3) Read carefully the warning message (“You have selected the OPSTEST SATI shortcut [...]”) and type “Y” and ENTER-key if you agree.
- (4) A second warning pop-up message will be displayed (“This CHMI version is for TEST and TRAINING purposes [...]”). Click “Continue” if you agree.

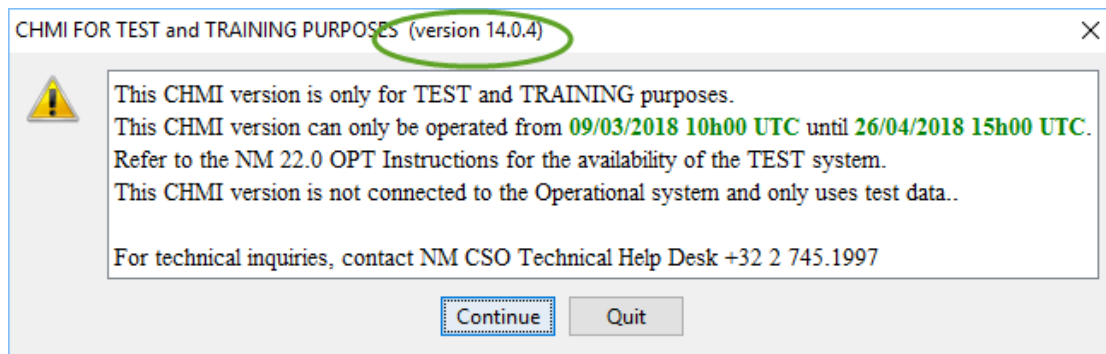


Figure 1: Second warning message

- (5) Log-in with your userID and token.
- (6) After a successful authentication, you will be connected to the OPT environment.

3.3.2 For non NM-managed PC

- (7) No registration is required.
- (8) You need to install the CHMI first; installation documentation will be available as from the 01/03/2018:
http://www.nm.eurocontrol.int/chmi_appsoft/CHMI/14.0.4/chmiaoinst14.0.4.pdf
- (9) Download and installation can be done as from the as from the 02/03/2018 at 10:00 UTC but access to the CHMI-OPT will be available only as from the 09/03/2017 (10:00 UTC - start of the OPT session).
- (10) As from the 09/03/2017 (10:00 UTC), access to the CHMI-OPT will be done via:
 - a) *For Windows 10 64 bits c:\Program Files (x86)\Eurocontrol\NM Applications\14.0.4\bin\chmi\run_CHMI_14.0.4_via_test1.sc.bat*

- b) For **Windows 10 32 bits**: *c:\Program Files\Eurocontrol\NM Applications\14.0.4\bin\chmi\run_CHMI_14.0.4_via_test1sc.bat*
- (11) Read carefully the warning message (“You have selected the OPSTEST SATI shortcut [...]”) and type “Y” and ENTER-key if you agree.
 - (12) Log-in with your userID and token.
 - (13) After a successful authentication, you will be connected to the OPT environment.

3.3.3 Check of the environment (OPT/OPS) used by the CHMI

- (14) To ensure that you are connected to the CHMI-OPT environment, check the “SAT/I” reference in the ATFCM Information window and in the CHMI title bar.

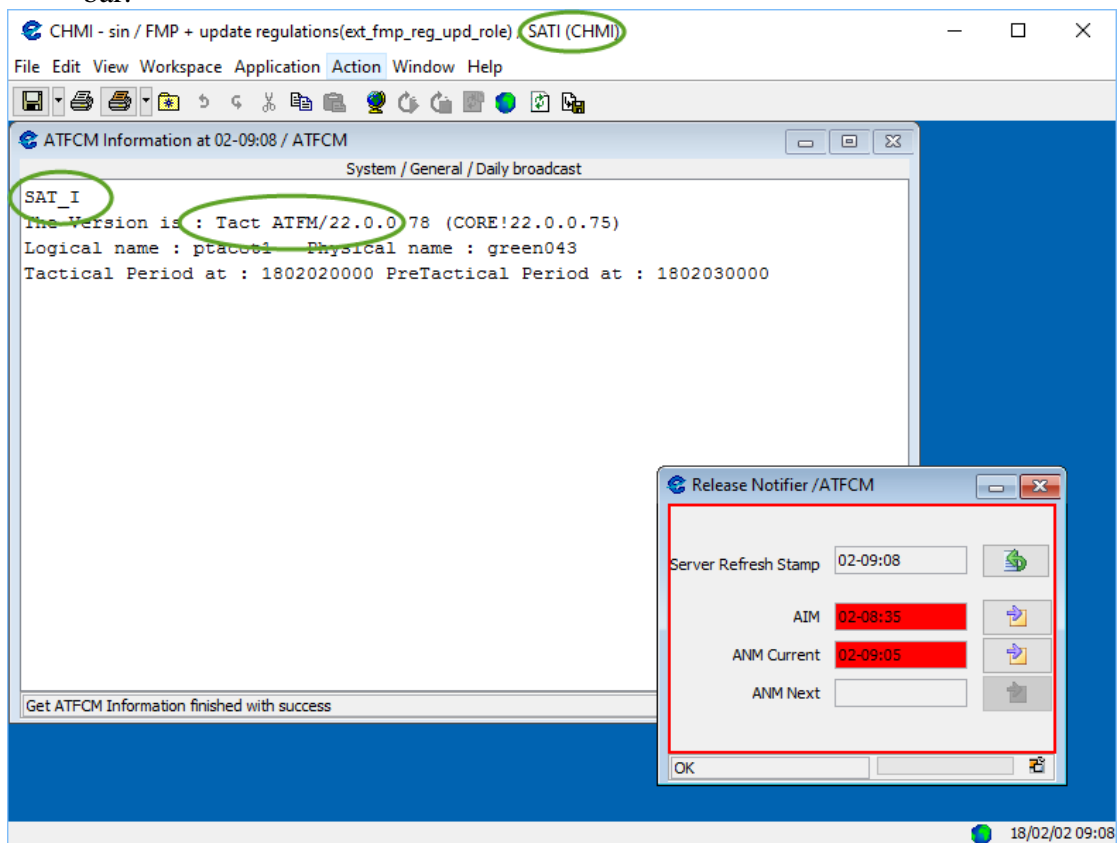


Figure 2: CHMI in OPT environment

3.4 Testing of the NOP Portal

- (15) No registration is required.
- (16) As from the 09/03/2018 (10:00 UTC - start of the OPT session), please use the following URL to test the NOP Portal-OPT:
<https://www.test1.nm.eurocontrol.int/PORTAL/gateway/spec/index.html>
- (17) Log-in with your userID and token.
- (18) After a successful authentication, you will be connected to the OPT environment.
- (19) To ensure that you are connected to the NOP Portal-OPT environment, check the “SAT/I” reference, under Network Headline News;

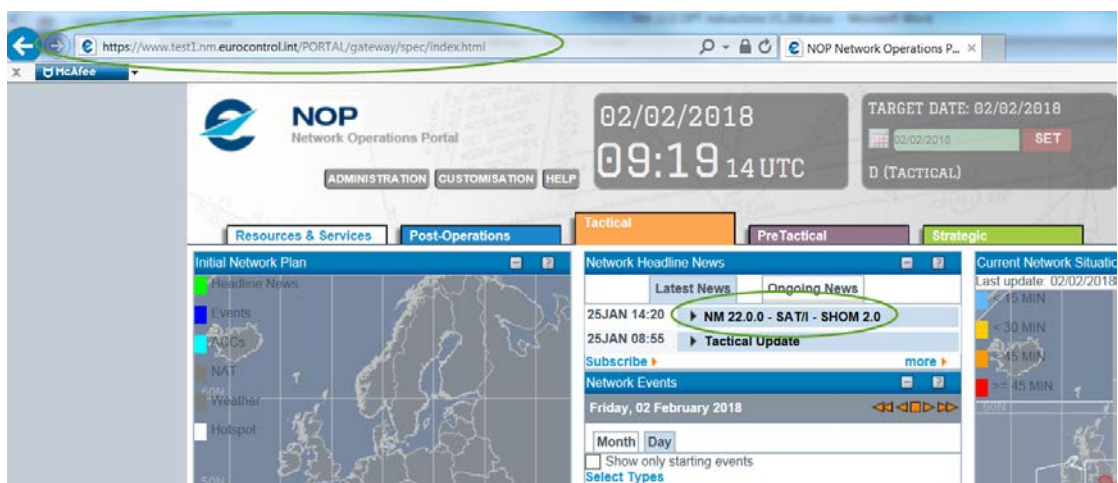


Figure 3: NOP in OPT environment

3.5 Testing of the NM B2B Services

- (20) No registration is required. NM22.0 B2B Pre-ops platform will be available as from 27/03/2018 14:00 UTC
- (21) Draft documentation for NM22.0 **preops** will be available (in pdf and HTML format) in a dedicated folder containing “NM22.0” in its title on the OneSkyTeam web site:
<https://ost.eurocontrol.int/sites/B2BWS/Shared%20Documents/Forms/AllItems.aspx>

4 How to participate

The testing session will take place weekdays from the 09/03/2018 to the 26/04/2018

4.1 Messages exchange

- (1) If you want to receive a message exchange between systems via AFTN or SITA for TACT IFPS please send registration form on §9 with the following information to nm.opt@eurocontrol.int
- (2)
 - a) *Full Name*
 - b) *Company/Organisation*
 - c) *Business Email Address*
 - d) *Phone Number*
 - e) *Token number (like p0abc) (if applicable)*
 - f) *Indicate the address from which you will send messages to the IFPS/ETFMS Test system*

Note: If this address is your operational address, then double ORMs will be received for all

Operational messages (as these are copied to the IFPS test system). Care should be taken to ensure that the ORMs from the IFPS/ETFMS test system are NOT used operationally.

4.2 Test message exchange on OPT

- (1) Go to the Internet (NM Portal) - Test platform) to connect to IFPUV:
<https://www.public.test1.nm.eurocontrol.int/PUBPORTAL/gateway/spec/index.html>
- (2) The IFPUV is on the lower right hand side of the portal)
Note: depending upon your browser settings the IFPUV application may not appear, particularly if you are using Internet Explorer versions 8 & 9. If this happens you will need to enable 'Compatibility mode', via the 'Tools' tab of your browser, and then re-start your browser session. If this does not resolve the problem please contact the NM Technical Helpdesk at: +32 2 7451997

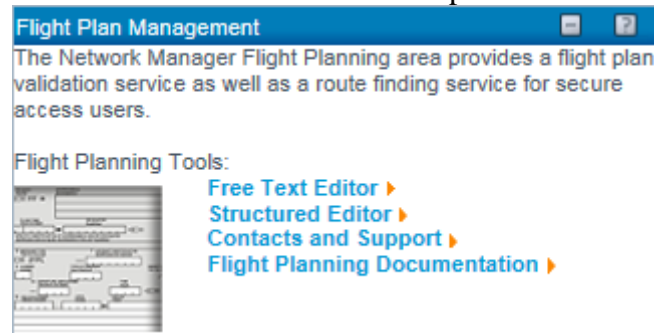


Figure 4: IFPUV in the NOP

- (3) NOP AFTN Address: EUCHZMFV

- (4) NOP SITA Address: BRUEY7X
- (5) OPT participants that wish to communicate with the NM via the AFTN/SITA test platforms must ensure that they communicate to NM the AFTN/SITA test address that will be used to receive messages sent by IFPS/ETFMS.
- (6) Test messages may be sent directly to the Acceptance test systems using the following addresses:

IFPS Test	:	AFTN: EUCHZMFT	SITA: ANREP7X
ETFMS	:	AFTN: EUCHZMTT	SITA: ANREA7X

5 Participant Configuration & Setup

- (1) The settings described below will be automatically maintained over AIRAC cycles and will therefore last until the end of all OPT testing or until otherwise modified in accordance with the registration data provided for a subsequent OPT session.

5.2 Participant Address Data

- (1) Participants to the OPT testing sessions can provide, via mail to nm.opt@eurocontrol.int, an indication of:
 - a) *For flight plan originators (Aircraft Operators, AROs, CFSPs):*
 - i) The address from which test flight plans will be sent to IFPS;
 - ii) Willingness to receive the resultant ACK, MAN, REJ at the address specified under 1 above;
 - b) *For ATC Units:*
 - i) The operational unit or entity for which messages are requested to be received e.g. Amsterdam ACC, Brussels TWR, etc.
 - ii) The test address to be used i.e. the test address that IFPS will assign to the unit specified
- (2) Details should be sent via the registration process described.

5.3 Outside IFPS area

- (1) ANSPs located outside the IFPS area of operations and flight plan originators (Aircraft Operators, Flight Plan Service Providers, and AROs) can participate in the exchange of flight plan data. The only constraint is that the flights must have at least one portion of route within the IFPS area of operations.

6 OPERATIONAL TESTING (OPT)

- (1) On-line testing via normal networks: using the dedicated NM test platform which will be supported by the SAT test team.
- (2) The OPT test sessions enable the complete suite of messages (FPL, CHG, CNL, DEP, DLA, RQP, RQS, AFP, APL, ACH, ACK, MAN, REJ) to be tested involving both flight plan originators (AOs, AROs, CFSPs) and ATS units (ACCs, UACs, APPs, TWRs, AROs).

6.2 Messages stored within the Test platform

- (1) The test platform is a mirror of the operational platform. The system has a copy of the ops feed however there will be limited manual processing of messages on the test platform so the ops database and the test platform database will not be fully aligned. Since the automatic pass rate is above 90% the Test platform database will still have a high volume of flights. For information on manual processing please see section 6.5.

6.3 Non-EUR Participation

6.3.1 Flight Plan Originators / Aircraft Operators

- (1) Flight Plan originators not normally operating into the IFPS or European region can participate but should be aware of the following:
 - a) *flight plans must contain at least one portion of the route within the IFPS area of operation;*
 - b) *the result of the IFPS processing of each test message is provided via the appropriate ACK, MAN or REJ messages (see the IFPS User Manual for details) and will be returned to the address from which the test message was received.*

6.3.2 ANSPs / ATC Units

- (1) An ANSP or ATC Unit located outside the IFPS area of operation can participate to an OPT session however in order to ensure that IFPS will send the resultant message to the unit concerned the test flight plan data must be submitted making use of the 'Re-addressing' feature of IFPS.

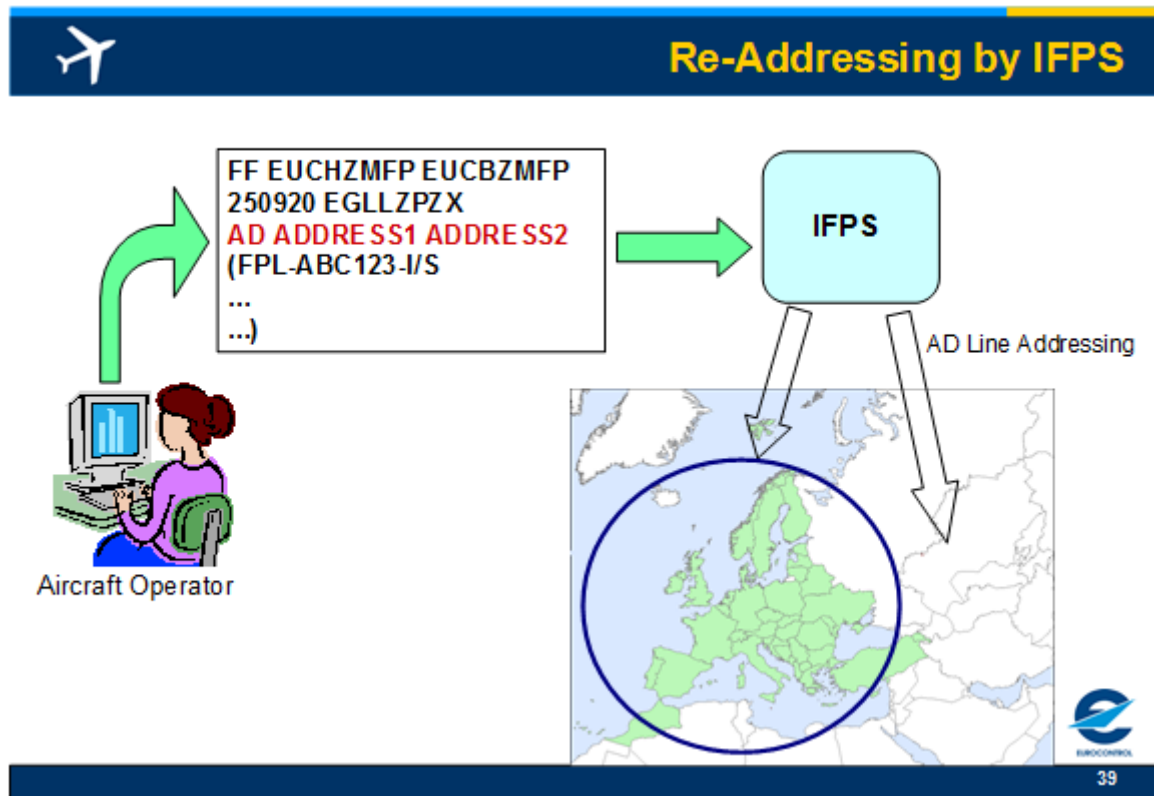


Figure 3: IFPS Re-Addressing Function (AD Line addressing)

For example: If Hong Kong ATC wishes to participate, using the test address 'VHHHZQZT' they should ensure test FPLs are submitted such as;

```

FF EUCHZMFT           ← IFPS test address
AD VHHHZQZT          ← Hong Kong test address provided via re-addressing mechanism
(FPL-VHH01XX-IS     ← callsign using 'XX' to identify it as a test message
-B744/H-SXDE1GHIJ4J5RWYZ/SB2    ← 'New' format
-EGLL1125           ← relevant to IFPS
-N0480F310 BPK7F BPK M185 CLN UL620 ARNEM UP147 RKN UL980
PENEK UM994 DENKO UN858 OSKUD/N0488F330 UN858 LAVAR UM874
ASKIL/K0902S1010 B102 UK R11 FV G3 AL B365 BK B923
GUTAN/K0888S1010 A368 URL G3 AKB A360 NALIK/K0880S1110 A360
ERULA/K0883S1130 A360 REVKI A460 KCA L888 SADAN Y1 OMBON B330
POU R473 SIERA
-VHHH1110 ZGSZ
-PBN/B2B3B4B5L1D2D3D4 NAV/RNVD1E2A1 EET/EHAA0021 EDVV0041 EDUU0100
EPWW0115 EYVL0154 UMMV0205 UUWV0228 UWPP0318 UWWW0340 UATT0359
UACC0454 UAAA0538 ZWUQ0633 ZLHW0732 ZPKM0851 ZGZU0957 VHHK1043
SEL/ADHJ REG/BHOT)
    
```

- (2) To assist with the creation of test messages which are relevant to the ATC unit concerned, it is highly recommended that an ATC unit participates together with its local Aircraft Operators and/or ARO.
- (3) It should however be noted that:
 - a) *Flight plans must contain at least one portion of the route within the IFPS area of operation;*

- b) *The result of the IFPS processing of each test message is provided via the appropriate ACK, MAN or REJ messages (see the IFPS User Manual for details) and will be returned to the address from which the test message was received. If these messages are not needed or cannot be received this must be indicated via the Registration Form.*

6.4 Test Flight Plans Identification

- (1) Test flight plans should be clearly identifiable so that IFPS Operators and recipient addressees can quickly identify them as such and identify their source.
- (2) It is strongly recommended that the callsign is modified to reflect the test nature of the message and the test participant. The following logic is proposed:

firstly: ICAO three letter designator of the AO or a three letter designator that is not one of the ones already allocated by ICAO (see ICAO Doc 8585) for an ATS participant (ARO)

followed by: a two digit reference number

followed by: the letters 'XX'

E.g.

DLH01XX 01st test FPL from Lufthansa

DDW14XX 14th test FPL from ARO Bremen

- (3) By following this rule test messages should not accidentally associate to either operational messages copied from the operational system or to other test messages.

6.5 Test Purpose Indication

- (1) It is highly recommended that an indication is made in Field 18 of the feature being tested e.g. RMK/PBN TEST or RMK/ SYNTAX TEST. This will assist the Test Team, who will be monitoring the invalid queue of messages, to know whether a particular error may be integral to the test or whether it is irrelevant to the test and could therefore be manually corrected.

6.6 Manual Message Processing

- (1) The IFPS test system will not be manned to the same level as the operational system. SAT Testers will give priority to the treatment of test messages, identified by the call sign.
- (2) SAT Testers will reject the message when an error is encountered which is considered to be the main purpose of the test but will correct any other errors considered to be incidental. In this way the originator of the message can 'see' the system reaction through the error message received.
- (3) It should be noted that IFPO correction logic will, therefore, not be the same as under operational conditions. Telephone co-ordination will not normally be initiated and more manual rejections will result.

6.7 IFPS Output

- (1) The distribution of messages by IFPS (ACK, MAN, REJ to flight plan originators and FPL, CHG, etc. messages to ATC units) shall be limited to those having indicated their willingness to participate in the testing through completion of the registration process.
- (2) Participants shall consider all messages that carry the IFPS test address (EUCHZMFT) as originator as having a non-operational status.

6.8 Support during OPT Sessions

- (1) Test participants may contact the SAT Testers (Test Team) during a test session for assistance when needed. As the Test Team may be very busy participants are encouraged to resolve their issues and only contact the Test Team as a last resort, for example, when several corrections and re-submissions fail to provide the desired result. If you find an issue you cannot resolve the please contact the SAT team via nm.opt@eurocontrol.int

6.9 Contacts during the OPT

- (1) **Technical issues during the OPT:**
During the OPT, if you have technical issues, please contact the NM Customer Service Desk and System Operation (CSO).
Important: Please mention that your issue concerns the OPT environment.
 - a) Telephone: +32 2 745 19 97
 - b) Fax: +32 2 729 90 23
 - c) eMail: NM.cso.help-desk@eurocontrol.int
- (2) For Airspace structure and airspace availability B2B services tests:
 - a) System Acceptance Test B2B tester: Peter Ralston
 - b) E-mail: peter.ralston@eurocontrol.int
 - c) Telephone: +32 2 729 51 81
- (3) Any other testing issues related queries and requests:
 - a) System Acceptance Test Manager: Gerard Mulholland
 - b) E-Mail: nm.opt@eurocontrol.int,
 - c) Telephone: +32 2 729 97 85

6.10 Important notifications related to NM22.0

- **NM22.0 - Browsers compatibility**
- In NM22.0 the following browsers are recommended:
 - Internet Explorer 11
 - Edge
 - FireFox
 - Chrome

The NM web-based HMIs will have been fully tested on Internet Explorer 11, Edge and FireFox.

Users should use a stable version of the browser that includes the latest security updates.

We no longer recommend a browser version (because there is no single version which is good for the lifetime of the release) but say that users should use a version with latest security updates. And regarding support 'For these recommended browser brands , NM undertakes to investigate and attempt to resolve problems that can be reproduced on the latest stable version of that brand. (Anything else is on a “best efforts” basis.)

- **NM22.0 - Operating Systems compatibility**
- For NM release 22.0, the recommended operating system is Windows 10; Windows 7 will also be supported.

- **NM22.0 - NM B2B web service:**

NM22.0 - NM B2B: Unavailability of version NM20.0

It is reminded to the NM B2B users that a NM B2B version remains available during two years after its deployment (“NOP/B2B Reference Manuals - Essentials” documentation, available on the NM B2B OneSky Team website). As a consequence, NM20.0 will no more be available (OPS and PREOPS) after NM22.0 migration.

7 Documentation

Network Operations handbook

Network Operations library	http://www.eurocontrol.int/lists/publications/network-operations-library
ATFCM Users Manual	http://www.eurocontrol.int/sites/default/files/content/documents/nm/network-operations/HANDBOOK/atfcm-users-manual-next.pdf
ATFCM Operations Manual	https://www.eurocontrol.int/sites/default/files/content/documents/nm/network-operations/HANDBOOK/ATFCM-Operations-Manual-next.pdf
NM B2B documentation	https://ost.eurocontrol.int/sites/B2BWS/default.aspx Registration required - contact NM.servicerequests@eurocontrol.int
CCAMS User Manual	http://www.eurocontrol.int/sites/default/files/content/documents/nm/network-operations/HANDBOOK/ccams-user-manual-next.pdf
IFPS Users Manual	http://www.eurocontrol.int/sites/default/files/content/documents/nm/network-operations/HANDBOOK/ifps-users-manual-next.pdf https://contentzone.eurocontrol.int/fpl/default.aspx
Flight Plan Guide and IFPS errors guide	https://contentzone.eurocontrol.int/fpl/default.aspx

8 Suggested Scenarios

- (1) The following scenarios are not exhaustive and are designed to give you a starting point from which to test the new functionality contained in the upcoming release.
- (2) The scenarios will be updated before the OPT commences.

8.1 FB723: Rolling AUP

Functionality	Description	Test
FB723: Rolling AUP		
The implementation of the FB will allow AMCs to publish AUP information via CIAM from D-6 to D-2 whenever feasible, and make it available on the NOP Portal	AMCs shall be able to publish AUPs in DRAFT status from D-6, when information are available, until the current AUP at D-1, which remains the last publication to provide a consolidated set of airspace information at network level (EAUP). Normally AUPs are prepared in DRAFT until 15 days in advance and promoted by AMCs in READY at D-1. Currently, such information are not shared with airspace users. With Rolling AUP, at least 6 days in advance, the airspace users could be aware, although not for FPL purposes yet, of stable information that could be used to improve their planning operations	Impacts on systems: <ul style="list-style-type: none"> • CIAM: allow the early publication of draft AUP messages. • NOP Portal: publish rolling AUP data. • Publish rolling AUP data and notify AOs of the availability of such information. • ASM Local Tools: being able to manage draft AUPs messages from D-6. • NM Web Services: being able to process Draft AUP messages from D-6 sent by ASM tools Impact on AMC procedures: AMCs will have to adapt their procedures if they want to be able to publish their national AUPs in draft up to 6 days in advance with all possible information available.

8.2 FB833: PTR Counts - SKIPIN/SKIPOUT to TVs

FB833: PTR Counts - SKIPIN/SKIPOUT to TVs		
This change represents a small step towards the implementation of a concept/design that is aiming to provide FMPs with more flexibility for tuning traffic counts, through the move of all elements directly linked to flow management onto the Traffic Volume	FB833 will improve the NM systems (ETFMS) elements namely the traffic volume model with the aim of providing FMPs with: <ul style="list-style-type: none"> • higher flexibility to FMPs; several TVs with the same reference location can have different skip-in/skip-out values • the flights airspace profile 	1. FB833 will have an impact on the local tools that are using the Airspace Volume profile for their local computations (from EFDs or PSFDs (B2B)). With the change in subject, EFD client applications can properly derive the collapsed sector profiles, but they will need

	<p>will no longer present holes/gaps and or overlaps, which is source of reports/questioning from the users, • users can see all the flights penetrating an airspace (querying the flights in an airspace will return all flights even if they are just clipping the airspace),</p> <ul style="list-style-type: none"> • IFPS and ETFMS brought closer regarding the Airspace profile, as IFPS is not using skip-in/skip-out parameters in support of FPL distribution service. 	<p>adjusting to consider the new EFDs airspace profile that will provide the full list of ESs - no holes/no overlaps.</p> <p>2. 2. FB833 will have an impact on the content returned to end users' queries using the CHMI (including NOP):</p> <ul style="list-style-type: none"> - counts performed on Airspace will be computed (returned by ETFMS) without considering the skip-in/ skip-out parameters; - flight lists on Airspace will be computed (returned by ETFMS) without considering the skip-in/ skip-out parameters; - airspace profile of individual flight from any flight lists will be computed (returned by ETFMS) without considering the skip-in/ skip-out parameters – <u>no holes / no overlaps</u>; - Only the counts and flight lists performed on Traffic Volumes will be computed (returned by ETFMS) considering the skip-in/ skip-out parameters.
<p>Note:</p>	<p>Please also see the B2B release notes for further in depth scenarios</p>	

8.3 FB890: API Developments

Functionality	Description	Test
FB890: API Developments		
<p>Operational objectives of the FB are the following :</p> <ul style="list-style-type: none"> • Integrate Flight arrival information into the NOP • Adapt NM traffic demand trajectories with received arrival information. • Enhance ATFCM arrival measures with local ANSP/Airport priorities and targets. 	<p>The changes will NOT be generally available to the external users. Access to the new capabilities will be strictly managed and following successful certification will be available to the participants of SES H2020 projects namely: PJ24, PJ25 and the CEF2015 AF4 project. The usage of the capabilities will</p>	<p>In the first instance, the FB890 changes will only be available to explicitly agreed participants of validation trial exercises (PJs). These PJs will be responsible for announcing the precise dates and content for the operational demonstrations in due course. These changes will NOT be made generally available to other external</p>

	<p>be during periods that will be announced by those projects in consultation with the relevant NM stakeholder group</p>	<p>users until after the trial exercises have been concluded. These enhancements will generally manifest as:</p> <ol style="list-style-type: none"> 1. Improvements to NM's traffic demand. 2. Improvements compared to traditional ATFCM arrival regulations. Recordings of new Arrival Planning Information messages in the flight OPSLOGs which are visible for all users accessing these logs. 3. For some flights: arrival regulations may now become the most penalising regulation to explicitly fulfil airport arrival flow flight prioritisation that is put in place to best serve TMA, airport resources and aircraft turnaround planning optimisation <p>Project's PJ24, PJ25 and CEF2015 will all perform OPS validations. Extensive usage of the SAT, OPT and PREOPS facilities will be undertaken for technical integration, verification and validation purposes.</p>
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8.4 FB893: NM airspace model evolution

FB893: NM airspace model evolution		
<p>FB893 constitutes the second wave of the CACD data model adaptations, required to Network Manager allow the seamless Annex 15 data download from the EAD and future EAIMS to CACD and to allow these data to be used in the future by operational NM systems. Several changes to CACD data model have been already rolled out in NM21.5 (FB862). FB893 is a continuation of these changes. More data model changes will be gradually rolled out over next</p>	<p>CR_040713: Aerodrome Elevation Some Aerodromes may have negative field elevation (e.g. Amsterdam EHAM -12ft). For some smaller world-wide Aerodromes field elevation may be unavailable. Currently, CACD does not accept negative Aerodrome field elevation and does not allow field elevation to be blank, in case if Aerodrome elevation is unknown. This CR implementation changes some business rules in CACD to allow negative Aerodrome field elevation to</p>	<p>This change does not impact operational NM systems and does not impact clients' systems. CACD will output negative and blank field elevation values converted to 0</p>

<p>NM releases. FB893 contains several CRs dedicated to the Aerodrome domain model changes and one CR related to Airspace domain. All changes aim to bring CACD data model closer to AIXM.</p>	<p>be stored in CACD and also to accept blank field elevation.</p>	
	<p>CR_040563: Business rules adaptation for world-wide AD data This CR changes several business rules in CACD to facilitate seamless world-wide AD data consumption from the EAD.</p> <ul style="list-style-type: none"> • In CACD all heliports had been characterised by a unique Runway of type 'Heli' before implementation of the CR_041043 in NM21.5, which introduced Aerodrome type not be stored as a separated property. Runway of type 'Heli' is redundant and will be removed • Today in CACD taxi times for all Aerodromes outside ENV_EXTR area are set to 10 minutes for small ADs and to 20 minutes for international ADs. Business rule relaxation will allow taxi times to be blank if unknown, avoiding keeping fictitious values • Currently, Aerodromes outside of ENV_EXTR area must not have associated SIDs and STARS. This business rule will be removed to allow SIDs and STARS outside of ENV_EXTR area to be kept in CACD. • Today CACD does not allow storing of runway directions for the Aerodromes outside of ENV_EXTR (ENV Extraction) area. Business rules will be removed to allow Runway directions for alien Aerodromes (i.e. Aerodromes outside the ENV_EXTR area). 	<p>This CR as a whole will not impact clients' systems. Default taxi times values will be generated for clients' systems (values will be set as before the change</p>

	<p>CR_034863: Aerodrome Flight Rules (IFR/VFR) At present Aerodrome flight rules are defined as Flow Restriction both in CACD and NM operational systems. In AIXM model AD flight rules are an attribute of the AD object. To align with the AIXM and to facilitate EAD data download, AD flight rules definition will be moved to the AD level. This attribute can have values: IFR, VFR, BOTH or OTHER. It will also have an associated time schedule, as allowed AD flight rules may change according to the schedule</p>	<p>This change impacts NM B2B clients: AD flight rules will be provided as an attribute of the Aerodrome, as prescribed by AIXM model, and AD flight rules will no longer be provided as a restriction</p>
	<p>CR_041955: Airspace Definition Alignment This change will allow the linkage of units of type FIC outside of ENV_EXTR area to their corresponding FIR or UIR. Actual FIC (Flight Information Centre) addresses outside ENV_EXTR area will remain blank until future NM releases.</p>	<p>Linkage will be implemented only in CACD and impacts neither NM operational systems nor clients' systems.</p>
	<p>Next 5 CRs (from CR_040044 to CR_040048) will facilitate Aerodrome data download from the EAD. None of these 5 CRs impact clients' systems as these new attributes will not be exposed via NM B2B. CR_041044: AD property for water This CR adds a property to the Aerodromes in CACD, which would allow distinguishing water Aerodromes. CR_041045: Abandoned or closed AD This CR adds a property for the Aerodromes in CACD which are currently completely 24/7 closed. CR_041046: Emergency only AD or AD with no facilities Some Aerodromes can be uncontrolled permanently or temporarily, according to the</p>	<p>will facilitate Aerodrome data download from the EAD. None of these 5 CRs impact clients' systems as these new attributes will not be exposed via NM B2B.</p>

	<p>associated time schedule (e.g. MIL AD, which is used by an aero club on weekend). This CR adds an "uncontrolled" property to Aerodromes in CACD, along with its associated schedule. CR_041047: Private ADs This CR adds property "private" to the Aerodromes in CACD. CR_041048: INTL/DOM ADs This CR adds a property to the Aerodromes in CACD, to allow distinguishing between international and domestic ADs. This will be derived from Customs Service availability on the AD. AD is considered as international if Customs Service is available at the AD (can be according to associated timetable or on request). This property will be optional for ADs outside of ENV_EXTR area</p>	
<p>Note</p>	<p><i>Only one CR (CR_034863) included in this FB impacts clients' systems. AD flight rules and their associated applicable time schedule will be moved from flow restriction level to AD attributes level, as defined by AIXM model. External users may need to modify their systems to receive correct AD flight rules values from NM B2B services.</i></p>	

8.5 FB906: Flight Planning Domain improvements

FB906: Flight Planning Domain improvements

<p>CR_040039: Suppress Copy REJ ORMs to AOA for RQP messages</p>	<p>When ATC send an incorrect RQP message to IFPS that is rejected, the Aircraft Operator may receive a copy of the Reject Operational Reply Message. The change is requested following an Aircraft Operator complaint that the amount of -TITLE REJ for RQP messages received cause confusion and workload issues.</p> <p>The same problem exists for AFP, FNM, MFS messages when they are rejected. The risk is that other REJ messages are overlooked due to the amount of copy REJ messages they are receiving for RQP/AFP/FNM/MFS not originated by them. By extension, the amount of -TITLE MAN could also cause confusion and workload issues, then, the requirement will also address the MAN messages in addition to the REJ one.</p>	<p>Copy to Aircraft operator suppressed</p>
<p>CR_041608: Change SEQPT default for APL</p>	<p>Because the standard surveillance equipment on commercial aircraft includes Mode_S, some ANSPs have problems when IFPS uses 'C' as the default surveillance equipment in the -SEQPT field (10b) of APL messages. During the AFP Workshop in May 2016, NM stakeholders asked that the default is changed to 'S'.</p>	<p>ATC systems that receive APL messages from IFPS may be impacted by the change of the default for the surveillance equipment from C to S.</p>

<p>CR_040806: Enhancement of the POSRTE field in IFPS REJ messages</p>	<p>To give the Airspace User's more information on the usefulness of the POSRTE field, it will include a difference indicator for the distance (expressed in +/- NM and +/- %). The difference indicator can be either 'PLUS' or 'MINUS', with a NM value and a percentage (PC) value. Example: -POSRTE N0450F400 TOR P601 BAVTA N873 TUSKA UN873 JUIST UP174 EEL UN872 PAM/N0450F410 UN872 DENOX UZ319 MOPIL/N0390F250: DIFF LENGTH PLUS 39NM 4PC</p>	<p>Client systems that receive REJ messages from IFPS may be impacted by the change to the format of the POSRTE field in the message (AFTN/SITA/B2B).</p>
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8.6 FB916: Scenario Repository Publication via B2B

Functionality	Description	Test
FB916: Scenario Repository Publication via B2B		
<p>As part of the overall Scenario management process, and taking into account the increasing linking between local and network systems, the publication function presents the way ATFCM Scenario information is presented and communicated. This change reflects:</p> <ul style="list-style-type: none"> • Improvements on the publication of ATFCM Scenario information, including TV description and suggested alternative reroutings. • Improvements on the calculation of reroutings as part of the Group Rerouting Tool (GRRT) functionality. • Revalidation process of the Scenario Reference published information, including suggested alternative reroutings, every AIRAC cycle to keep the published ATFCM scenarios up-to-date in the NOP Portal. • Extra attributes to the 	<p>CR_043025: Scenario Publication Improvements Minor improvements that clarify publication process. Network Manager CR_043026: Scenario revalidation: Alternative Routes still flyable Alternative routes will now also be revalidated after AIRAC updates. CR_043027: Scenario attributes revalidation During scenario validation check correctness of From/To attributes with regard to latest TV definition. CR_043029: Scenario GRRT improvements (Note: This CR belongs to FB924 but impacts FB916 by improving rerouting feature) This CR will allow more reroutes to be generated (now only within 7 seconds); it will also improve GRRT algorithm to allow horizontal optimisation in case of vertical reroute. Preferred historical reroutes</p>	<p>In the scenario revalidation process, alternative routings need also to be checked for validity. The possibility to identify flights impacted by zero-rate regulations provides the possibility to analyse scenario effectiveness in the post-ops process. This may change analysis procedures.</p>

storage service to be able to analyse the effectiveness of the published ATFCM scenarios (post-ops activity)	will be taken into consideration when computing reroutings. CR_043030: Query by AO for impacting scenario New field in B2B and NOP Portal flight list that indicates 'impacted by zero rate regulation' (i.e. scenario)	
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8.7 FB924 - Rerouting Evolutions

FB924 - Rerouting Evolutions		
<p>The changes will NOT be generally available to the external users.</p> <p>Access to the new capabilities will be strictly managed and following successful certification will be available to the participants of SES H2020 projects namely: PJ24, PJ25 and the CEF2015 AF4 project. The usage of the capabilities will be during periods that will be announced by those projects in consultation with the relevant NM stakeholder group fora.</p>	<ul style="list-style-type: none"> Improvements on the calculation of reroutings as part of the Group Rerouting Tool (GRRT) functionality. Revalidation process of the Scenario Reference published information, including suggested alternative reroutings, every AIRAC cycle to keep the published ATFCM scenarios up-to-date in the NOP Portal. <p>Extra attributes to the storage service to be able to analyse the effectiveness of the published ATFCM scenarios (post-ops activity).</p>	<p>In the scenario revalidation process, alternative routings need also to be checked for validity.</p> <p>The possibility to identify flights impacted by zero-rate regulations provides the possibility to analyse scenario effectiveness in the post-ops process. This may change analysis procedures.</p>
CR_043029: Scenario GRRT improvements	(Note: This CR belongs to FB924 but impacts FB916 by improving rerouting feature)	<p>This CR will allow more reroutes to be generated (now only within 7 seconds); it will also improve GRRT algorithm to allow horizontal optimisation in case of vertical reroute.</p> <p>Preferred historical reroutes will be taken into consideration when computing reroutings</p>
CR_043030: Query by AO for impacting scenario	New field in B2B and NOP Portal	that indicates 'impacted by zero rate regulation' (i.e. scenario)
CR_043027: Scenario attributes revalidation	Scenario attributes revalidation	During scenario validation check correctness of From/To attributes with regard to latest TV definition.
CR_043026: Scenario revalidation: Alternative	Scenario revalidation: Alternative Routes still	Alternative routes will now also be revalidated after

Routes still flyable	flyable	AIRAC updates.
CR_043025: Scenario Publication Improvements	Scenario Publication Improvements	Minor improvements that clarify publication process

8.8 CR_043146: Flight Planning Domain improvements

Functionality	Description	Test
CR_043146: Flight Planning Domain improvements		
Objective of the change is to make sure that any route change without coordination by IFPS is clearly identified in the distributed flight plan.	<p>With the NM21.5 release, the output of the IFP/IFPSROUTEMOD was included when IFPS automatically changed the Field 15 string. The implementation caused difficulties for some ANSPs because of the high number of FPLs that contained the indicator. To solve the issue for the ANSPs, the auto insertion was disabled.</p> <p>With the NM22.0 release the auto insertion will again be enabled with this change to reduce the occurrences of when the IFP/IFPSROUTEMOD is included by stopping inclusion when only the 'DCT' or SID/STAR is removed as the first/last element of the route.</p>	The increase in the use of the IFP indicator may have an impact on systems that receive flight plan messages from IFPS.

9 Registration Request (OPT)

A) State:

B) ATS Unit:

C) Contact Person Name :

Telephone :

Fax :

E-mail:

D) Token number (like p0abc) (if applicable):

E) Indicate the session(s)/dates during which you wish to participate.

Test Session/dates	State the Functionality to be tested

F) Indicate the address where flight planning messages from the IFPS Test system are requested to be received:

G) If the address given in E) is a test address, indicate the operational address(es) or unit(s) it replaces or simulates for the purpose of testing:

H) If you intend to send test messages to the IFPS test address indicate the address you will use i.e the address from which IFPS will receive these messages:

Do you wish to receive ACK, MAN, REJ messages? Yes / No

I) Indicate the address from which you will send messages to the ETFMS Test system (if applicable):

J) Indicate if you require B2b access to OPT chain Yes

- K) CHMI application: No registration is required see detailed instructions in **section 3.3**
- L) B2B: No registration is required. NM22.0 B2B Pre-ops platform will be available as from as from 27/03/2018 14:00 UTC

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