



EUROCONTROL NETWORK MANAGER RELEASE NOTES

Planned for implementation 2020-2021

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DOCUMENT CHARACTERISTICS

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| EUROCONTROL NETWORK MANAGER RELEASE NOTES | Planned for implementation 2020-2021 | 1.1 | 28/01/2020 |
| Abstract | | | |
| <p>This document describes the new or modified functions (affecting external users) delivered by the Network Manager as part of the Network Manager software releases.</p> <p>This document is available at: https://www.eurocontrol.int/library?f%5B0%5D=activity%3A774</p> | | | |
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| TLP STATUS | | |
|--------------|-------------------------------------|---|
| Intended for | Detail | |
| Red | <input type="checkbox"/> | Highly sensitive, non-disclosable information |
| Amber | <input type="checkbox"/> | Sensitive information with limited disclosure |
| Green | <input type="checkbox"/> | Normal business information |
| White | <input checked="" type="checkbox"/> | Public information |

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Edition History

The following table records the complete history of the successive editions of the present document.

| Edition No. | Edition Validity Date | Reason |
|-------------|-----------------------|---|
| 1.0 | 03/12/2019 | First edition - NM24.0 content and initial deployment plan. |
| 1.1 | 28/01/2020 | <ul style="list-style-type: none"> - Updates to NM24.0 content - NM24.0 migration plan - Important notification: I2_118817 (Problem when updating the EOBT with a second FPL) - p.10 |

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1 INTRODUCTION

This document describes the new or modified functions delivered by the Network Manager as part of the Network Manager software releases which affect external users.

The purpose of this document is to give users of Network Manager Services advance notice of modifications to enable them to anticipate any impact on their operational procedures and/or systems.

The Network Manager Releases include many changes arising from different sources and coordinated via various fora. They allow the implementation of new functionalities to cope with Network Manager Directorate business plans.

The Network Manager Release Notes are organised as a rolling document describing the functions currently under development for future releases. Other functions which are being considered for possible development but which are not yet ready to be presented are not included in this document.

If you wish to automatically receive the new versions of the Release Notes (and any communication related to the NM Releases) by email, please register at:

<http://www.eurocontrol.int/network-operations/self-registration-form>

(Choose "Subscribe to receive e-mail notifications when the NM Release Notes are updated" in the field "purpose of the request").

The current document is available at:

<https://www.eurocontrol.int/library?f%5B0%5D=activity%3A774>

(Select the "Release and deployment" category)

Any questions or comments related to the Network Manager Releases may be sent to:

nm.releases@eurocontrol.int

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2 Releases content

Only FBs or CRs that have an impact on operations for external users are listed below.

| Programme | Functional Block | | NM24.0 |
|--|---|-------------|--------|
| Airport-Network Integration | | §3.1 | |
| FB1027 | AOP/NOP Integration - Phase IV | | p.16 |
| FB1066 | Tower Update A-DPI evolution | | p.17 |
| Airspace Management and Advanced FUA | | §3.2 | |
| FB1064 | ASM - Advanced FUA process improvement | | p.18 |
| CTM (Cooperative Traffic Management) | | §3.3 | |
| FB984 | Network Impact Assessment / Best measures | | - |
| FB987 | STAM further developments | | p.20 |
| FB1069 | Network tactical stability (CASA Delay reduction & SRM Frequency) | | - |
| FB1070 | Target Time improvements | | p.21 |
| FB1072 | Predictability improvements | | p.22 |
| EAIMS (European ATM Information Management Service) | | §3.4 | |
| FB1086 | CACD validation of RAD | | p.23 |
| FPFDE (Flight Plan and Flight Data Evolution) | | §3.5 | |
| FB1074 | FF-ICE filing Function - file eFPL | | p.24 |
| Free Route Airspace (FRA) | | §3.6 | |
| FB1035 | CASTAR Improvements | | - |
| FB1041 | FRA improvements - Activation | | p.25 |
| FB1084 | FRA improvements | | p.25 |
| n-CONECT | | §3.7 | |
| FB1095 | RAD Full Completion | | p.26 |
| Operations Improvements | | §3.8 | |
| FB1042 | ATFM messaging for AOs via B2B | | p.27 |
| I2_118832 | Retrieving original ADES for diverted flight via B2B | | p.28 |
| I2_118817 | Problem when updating the EOBT with a second FPL | | p.10 |
| FB1059 | ATFCM Domain improvements | | p.29 |
| FB1085 | eHelpDesk improvements | | p.30 |
| CR_047018 | Flight efficiency - Enhance GRRT | | p.31 |

FB984, FB1069 and FB1035 won't have any impact for externals so are not included in the NM Release Notes.

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2.1 Functional Block description

Each Functional Block is described in a table with the following fields. All descriptions are focused from an external NM point of view.

| FB...: Number and name of the Functional Block | |
|---|---|
| (optional) Internal NM | |
| <p>“Internal NM” means that the Functional Block has no direct impact for external NM users (on procedures, interfaces or systems). The Functional Block may have an indirect impact by improving the quality of the service delivered by NM.</p> | |
| Users impacted | <p>The categories of NM Users which are impacted by the new features of the Functional Block:</p> <ul style="list-style-type: none"> U1. Flow Manager (FMP) U2. Airspace Manager (AMC) U3. Airspace User (Civil) U4. Airspace User (Military) U5. ENV data provider U6. Management (eg crisis management, performance management) U7. Post-ops analyst U8. AO or CFSP U9. CAA, EASA U10. Non-CDM Airport U13. CDM-Airport U15. Advanced ATC TWR Airport U11. ARO U12. Internal NM U14. Air Navigation Service Provider (ANSP) U0. Other |
| Application impacted | <p>The NM application(s) or service(s) that will be impacted by the Functional Block:</p> <ul style="list-style-type: none"> A1. CHMI A2. CIFLO, CIAO A3. CIAM A4. CACD A5. Flow management systems (Predict, ETFMS) A6. FPL (IFPS) A7. Datawarehouse (NMIR) A8. CCAMS A9. CSST A10. NOP Portal A11. NM B2B A12. ASM Tools A13. NMVP A14. n-CONNECT A15. n-CONNECT: AIRSPACE@NES A16. n-CONNECT: RAD@NES |

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| | |
|-----------------------------------|--|
| | A17. n-CONNECT: CAL@NES A0. Other |
| Objective | Operational objectives of the Functional Block. |
| Description | Description of the main features delivered to external NM users. Some FBs (mostly the ones belonging to “Operations Improvements” Programme) may content the CR (Change Request) number of the new features (like CR_XXXXXX). Please refer to this CR number when requesting information to NMD. |
| Impact for external users | Technical or operational impact the Functional Block may have on the external users. I0. No impact. I1. Impact on procedures. I2. Impact on Human-Machine interface. I3. Impact on users’ systems. |
| Impact description | Description of the impact for the external users. |
| Service reference | Hyperlink toward the NM activity(ies), service(s) and product(s) that will be impacted by this Functional Block. The global catalogue is available at the following address: https://www.eurocontrol.int/what-we-offer |
| Impact on Services Specifications | Will the FB or CR have an in impact on the NM Services Specifications? S0. Assessment to be performed or on-going. S1. The FB will not have any impact on the NM Services Specifications. S2. The FB will have an impact on the NM Services Specifications. Nota: Services Specifications documents will be made available at a later stage. |
| Operational deployment plan | The way the Functional Block will be deployed: D1. FB will be deployed in Operation along with the release migration. FBs deployed as D1 normally do not include new or changed ATFCM procedures. D2. FB will be subject to a Pilot Phase (Operational Trial) followed by a Go/NoGo decision for ops deployment after Release Migration. New ATFCM procedures or changed ATFCM procedures are normally only issued as a result of D2 deployment. These are issued via Ops Instructions after the consultation process agreed with ODSG. D3. FB will be subject to R&D ops validation (e.g. SESAR). D4. The analysis part of the FB will be done in the Release and the development will be candidate for the next Release. |
| Users’ testing | Depending on the Operational deployment plan: <ul style="list-style-type: none"> • If D1: <ul style="list-style-type: none"> • O1: The FB is planned to be part of the NM Release OPT. • O2: The FB will not be part of the NM Release OPT. • If D2 or D3: provide additional information on the activities that will take place (pilot phase, ops validation phase, etc.) |
| Documentation publication | The documentations that will be updated following the deployment of the Functional Block. |

2.2 Change to NM Services Specifications

Any change to the NM Services Specifications will be provided in this paragraph.
The Service Specifications documents will be made available at a later stage.

3 Network strategic projects

You will find below a short description of each Programme that the Network Manager developments are serving.

3.1 Airport-Network integration

The programme aims at facilitating the better integration of airports and its operations with the ATM network. This includes the following areas:

- Connection of A-CDM and Advanced Tower airports to the NM systems.
- Provision of pre-tactical and tactical information to the main NM stakeholders (Airport Operators, Airspace Users and ANSPs) through the NOP portal and future web services.
- Provision of web service based tools for post-operational performance assessment to airports.
- Contribution to events management processes and information provision as to enhance the operational picture through the before-mentioned means.
- Development of new services related to deliverables becoming mature from SESAR research activities (AOP/NOP integration, APOC, Target Times for airports, etc.)

3.2 Airspace management and advanced FUA

ASM and Advanced FUA are major components of the Network Strategy Plan (NSP) 2015/2019. The project contributes directly to the NSP Strategic Objective 3 (SO3) "Implement a seamless and flexible airspace enabling Free Routes", together with the "Free Route Airspace" network strategic project.

The Project will aim at:

- Introducing performance driven operations based on the management of Airspace Configurations in fixed route network and FRA environments.
- Providing processes that support the use of more dynamic and flexible elements.
- Describing a seamless, CDM based process with an advanced real time management of Airspace Configurations as well as a continuous sharing of information among all ATM partners enabled by advanced technology.

The main Lines of Improvement of the Project are:

- Airspace Configuration Definition and Operational Deployment.
- A Collaborative Decision Making Process (ASM/ATFCM/ATC integration).
- The Rolling Process.
- ASM solutions to improve network performance.
- ASM operations in FRA environments.
- ASM system support and data management.
- ASM post ops and performance planning.

3.3 CTM (Cooperative Traffic Management)

The CTM Strategic Project aims to optimise traffic delivery through a transparent cooperative approach involving all operational stakeholders in the ATM network: ATC-, Airport-, AU (Airspace Users)- and NM- operations. The CTM Strategic Project addresses the interface between local and network operations and aims to improve tactical coordination processes, enabling the application of flight and flow-specific targeted ATFCM measures, including Target Time measures.

CTM development areas focus on:

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- AU's collaborative processes, improving network situational awareness to AU in order to include preferred targeted measure options into network coordination processes.
- Targeted Measures, specific to only certain flights and flows, minimizing the need for inefficient global ATFM measures.
- Dynamic Network Coordination, supported by continuous information sharing of local and network information, and by digital workflow processes with automated system support where feasible.
- Network Best Measures, continuously simulating impact assessments for single or combined proposed measures optimising local and network performance.

3.4 EAIMS (European ATM Information Management Service)

The European ATM Information Management Service (EAIMS) aims at ensuring access to a consolidated, consistent and operationally validated data in a seamless and transparent way as from a single access point to support ARO/AIS/ASM/ATFCM/ATC, flight operations and airport operations.

Through EAIMS, the end user will be provided access to all the required, consolidated, consistent and operationally validated data in a seamless and standardised way from a single access point, which will enable ASM/ATFCM/ATC, flight operations and airport operations.

3.5 PPFDE (Flight Plan and Flight Data Evolution)

This PPFDE project encompasses the flight planning developments associated with the introduction of FF-ICE, VFR, OAT and Flight Object. Each of these areas of development have their own specifics with regard to a deployment within NM and the European area of operation.

It's the role of the PPFDE project to coordinate their implementation with the relevant stakeholders. FF-ICE/1 enhances the flight plan data exchanges facilitating a CDM process between AOs/CFSPs, the Network Manager and ANSPs in the pre-departure phase of the flight, with the aim of improving consistency and the accuracy of 4D flight trajectories maintained by the different stakeholders.

In addition to trajectory related information it facilitates an enrichment of the flight plan content, such as operator preferences or advanced CNS capabilities. It also enables introduction of automated exchanges through the use of modern communication methods and technologies, such as B2B and SWIM.

FF-ICE/1 is the very first step on the path towards enabling trajectory based operations.

3.6 FRA (Free Route Airspace)

Free route airspace is a specified airspace within which users may freely plan a route between a defined entry point and a defined exit point, with the possibility to route via intermediate (published or unpublished) waypoints, without reference to the ATS route network, subject to airspace availability. Within this airspace, flights remain subject to air traffic control.

The project supports the implementation of the FRA concept, as described in the European Route Network Improvement Plan Part 1 across the NM area. It also forms an integral part of Network Operations Plan (NOP) for the forthcoming five years and is expected to make a major contribution to the Network Performance Plan (NPP). It manages the required system changes in NM and undertakes airspace design, simulation and validation activities required for FRA implementation as well monitoring and reporting on implementation progress.

3.7 n-CONNECT

The n-CONNECT (network-COMmon Enhanced Collaborative ATM) Programme corresponds to the "NM Ops Service Platform" Strategic Project identified in the NSP (Network Strategy Plan), providing a global vision for the NM service interfaces.

The initial focus of n-CONNECT is a planned convergence to single, redesigned HMI for all users, fit for purpose and flexible enough to meet the needs of the different user roles (both internal to NMOC and external).

Through a sequence of projects, the programme will develop services and tools to:

- Ensure access to the Network view to all Stakeholders involved in evolution of NM functions and future ATM;
- Make Network information & decision flows available to support operational CDM between different Stakeholders, across the Network and across the ATFCM phases; and
- Take advantage of new technologies.

n-CONNECT will deliver in the following 3 areas:

- B2C interface
- B2B services
- Service management developments in support of both the B2B and B2C services

3.8 Operations improvements

3.8.1 Domain improvements

Every Release delivers improvements to the NM Operational Domains:

- ATFCM Domain.
- Flight Planning Domain.
- Airspace Data Domain.

3.8.2 Transponder Code Function (CCAMS)

In accordance with the Network Manager mandate for the Transponder Code Function (TCF), CCAMS is operated on behalf of states as one of the possible technological solutions supporting the unambiguous and continuous identification of aircraft.

The final goal is to have the use of the downlinked aircraft identification (e.g. through Mode S) operational in the whole area with CCAMS as a back-up technology. Therefore CCAMS is implemented currently in 18 states and the number of users is expected to increase in the coming years.

3.9 Performance programme

The ATFM, Network Manager and Performance IRs stress the need for Monitoring and Reporting (M&R) of performance. The aim of this Programme is to provide the data and reporting (including datawarehouse and NMIR) that address the M&R needs.

The Programme includes a wide variety of activities such as: the adaptation of algorithms or databases, creation of new data sets, modification of interfaces graphical identity, and new reports following users' requests. The changes allow the NM to fulfil its commitment on M&R, support other stakeholders with their M&R responsibilities and prepare NM for next SES reference period.

4 Release NM24.0

4.1 Important notifications related to NM24.0 migration

4.1.1 I2_118817: Problem when updating the EOBT with a second FPL

I2_118817: Problem when updating the EOBT with a second FPL

| | |
|-----------------------------------|---|
| Users impacted | <p>U3. Airspace User (Civil)</p> <p>U4. Airspace User (Military)</p> <p>U8. AO or CFSP</p> <p>U10. Non-CDM Airport</p> <p>U13. CDM-Airport</p> <p>U15. Advanced ATC TWR Airport</p> <p>U11. ARO</p> <p>U12. Internal NM</p> <p>U14. Air Navigation Service Provider (ANSP)</p> |
| Application impacted | A6. FPL (IFPS) |
| Objective | Do not allow a second FPL to be filed to IFPS with a different EOBT to the flight in NM. |
| Description | <p>The update of the EOBT with a second FPL is not allowed in IFPS. If it is attempted by sending a FPL to IFPS, an ACK message is returned with a "COMMENT: Existing FPL has been updated". This is completely misleading because the existing FPL has not been updated.</p> <p>After this fix is delivered, when a FPL associates to another FPL changing the EOBT, the FPL will be invalidated with the new EFPM401 error saying "NOT ALLOWED TO USE A FPL TO UPDATE THE EOBT. DLA OR CHG IS REQUIRED"</p> |
| Impact for external users | <p>I1. Impact on procedures.</p> <p>I3. Impact on users' systems.</p> |
| Impact description | If a flight plan originator attempts to update of the EOBT with a second FPL, the second FPL will be rejected by IFPS. |
| Service reference | Flight plan filing and management |
| Impact on Services Specifications | S1. I2_118817 will NOT have any impact on the NM Services Specifications. |
| Operational deployment plan | D1. I2_118817 will be deployed in Operation along with the release migration. |
| Users' testing | I2_118817 is planned to be part of the NM Release OPT (Operational Testing Session) |
| Documentation publication | IFPS Users Manual |

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4.1.2 Introduction of IAPs into CACD

| | |
|---------------------------|---|
| Users impacted | U0. Other: Any NM B2B user |
| Application impacted | A11. NM B2B |
| Objective | Increase the precision of flight trajectory calculations by introducing IAP (Instrument Approach Procedure) in CACD. |
| Description | <p>In NM23.0 arrival procedures (STAR) connect en-route routes to the Aerodromes, where the last segment(s) of the STAR is used to represent IAP.</p> <p>With NM23.5 (FB1016 - CR_041962), internal NM model for terminal procedures have been aligned to AIXM. Namely, NM supports an additional terminal procedure type - Instrument Approach Procedure (IAP).</p> <p>IAP starts at the Initial Approach Fix (IAF) and ends at the RWY. Old terminal procedure model are still supported for backwards compatibility reasons.</p> <p>As from NM24.0, IAP will start to be gradually introduced in CACD, as published by the States.</p> <p>Given the necessity to provide backwards compatibility with the old procedures model, the way SID/STARs are represented in CACD and provided to the users of NM Airspace B2B will not change.</p> <p>This process might continue over several releases.</p> <p>Having IAP in NM systems, will increase precision of the flight trajectory calculations and landing time estimation.</p> <p>Consequently, this change will impact NM B2B users and may impact external systems using NM B2B data.</p> |
| Impact for external users | <p>I2. Impact on Human-Machine interface.</p> <p>I3. Impact on users' systems.</p> |
| Impact description | NM B2B users downloading Airspace Data will have to take into account the change into terminal procedures model. |

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4.1.3 NM24.0 - Browsers compatibility

Browsers recommended in NM24.0:

- FireFox,
- Chrome.

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).

Please note that Internet Explorer will no more be supported as from NM24.0.

4.1.4 NM24.0 - Operating Systems compatibility

The recommended operating system is Windows 10. Issues reported on CHMI using Windows 7 will be fixed on a best effort basis.

4.1.5 NM24.0 - NM B2B: Unavailability of version NM22.0

It is reminded to 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, NM22.0 will no more be available (OPS and PREOPS) after NM24.0 migration.

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4.2 NM24.0 migration

| Deployment Plan | 2020 | | | | | | | | | | | |
|-------------------------------------|------|----|---|----|---|---|---|---|---|---|---|---|
| | J | F | M | A | M | J | J | A | S | O | N | D |
| Release NM24.0 | | | | | | | | | | | | |
| Presentation of NM24.0 to externals | | 11 | | | | | | | | | | |
| OPT | | | 3 | 24 | | | | | | | | |
| Start of migration | | | | 28 | | | | | | | | |

4.2.1 NM24.0 Network Operations Handbook

Network Operations Handbook will be made available one month before the NM Release migration at:

- The NM Network Operations library:
<https://www.eurocontrol.int/library?f%5B0%5D=activity%3A774>
- The Public and Restricted NOP Portal (“Network Operations Handbook” portlet):
<https://www.public.nm.eurocontrol.int/PUBPORTAL/gateway/spec/index.html>

4.2.2 Presentation of NM24.0 to externals

A video conference presenting the NM24.0 Release will take place on the 11th of February 2020 at 1h PM UTC (2h PM Brussels time).

More information on the way to connect may be retrieved at:
<https://www.eurocontrol.int/event/eurocontrols-nm240-release-webinar>

4.2.3 NM24.0 testing - OPT session

NM24.0 OPT will take place from the 03rd of March 2020 to the 24th of April 2020.

The NM24.0 OPT (Operational Testing session) will enable users to assess the potential impact of NM24.0 against their systems or procedures before NM24.0 migration.

Users will be able to:

- Download and test the new NM24.0 CHMI,
- Test the new NM24.0 NOP Portal,
- Test some new FBs (operational scenario provided).

No registration is required.

Please send any questions related to the OPT to nm.opt@eurocontrol.int

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4.2.4 NM24.0 migration plan

The migration of NM systems from NM23.5 to NM24.0 with start on the 28/04/2020 and last 7 days.

| Software / Service (Times are UTC) | Unavailable from | To | Remark | Business impact during migration |
|---|---|----------------------------------|---|--|
| CHMI software | CHMI software (version v16.0.4) and documentation availability: - For non NM-managed PC: 13/03/2020 - For NM-managed PC: Software will be pushed on the PCs as from the 17/03/2020 but not activated (see below). | | | |
| ATFCM CHMI activation except CIAM | 28/04/2020 21:00 | 29/04/2020 00:00 | Expected downtime 1h30 + 1h30 provision in case of rollback | No access to NM services via CHMI |
| CIAM AMC activation | 05/05/2020 16:30 | 05/05/2020 20:00 | - | No access to NM services for CHMI AMC positions (using CIAM) |
| NOP Portal (CPA) unavailability | 28/04/2020 21:00 | 29/04/2020 00:00 | Expected downtime 1h30 + 1h30 provision in case of rollback | No access to NOP Portal (Public and Protected) |
| IFPUV unavailability | 04/05/2020 22:00 | 05/05/2020 00:00 | Expected downtime 1H00 + 1H00 provision in case of rollback | No Flight Plan validation service via all channels including CHMI, NOP Portal and B2B Web Services |
| SAFA / ACC3 Services (FAAS system) unavailability | 04/05/2020 22:00 | 05/05/2020 00:00 | Expected downtime 1H00 + 1H00 provision in case of rollback | No SAFA service during this time period |
| CSST service unavailability | 29/04/2020 07:00 | 29/04/2020 09:00 | - | No CSST service during this time period |

| System (Times are UTC) | Unavailable from | To | Remark | Business impact |
|--|----------------------------------|----------------------------------|---|--|
| ATFCM services | | | | |
| ETFMS, PREDICT, CUA | 28/04/2020 21:00 | 29/04/2020 00:00 | Expected downtime 1h30 + 1h30 provision in case of rollback | No Flow Management Services available via all channels including CHMI, NOP Portal and B2B Web Services |
| DWH (Datawarehouse) | 29/04/2020 00:00 | 29/04/2020 06:00 | - | No Query/Replay in CHMI, some NMIR reports will be unavailable. |
| Flight Plan services | | | | |
| IFPS | 04/05/2020 22:00 | 05/05/2020 00:00 | Expected downtime 1H00 + 1H00 provision in case of rollback | No Flight Plan filing services via all channels including CHMI, NOP Portal and B2B Web Services |
| Airspace and Capacity Data Services | | | | |
| ENV/CACD | 05/05/2020 16:30 | 05/05/2020 20:00 | - | No access to CIAM |
| No EUUP nor on-line updates will be done in CACD during CACD migration | | | | |

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NM B2B services (Times are UTC)

Important note: As the NM B2B services use the NM Back-End systems, NM B2B services will be disrupted during the migration of these systems. In particular, Flight Services will not be available during IFPUV migration (c.f. above).

NM24.0 documentation, wsdl and xsd files
 NM24.0 documentation (including wsdl and xsd files) is planned to be published in **draft** along with the PREOPS migration on the NM B2B services OneSky Team website <https://ost.eurocontrol.int/sites/B2BWS>.

| Platform | | Before NM24.0 PREOPS migration - 30/03/2020 06:00 | After NM24.0 PREOPS migration - 30/03/2020 14:00 | Migration to NM24.0 OPS From 28/04/2020 21:00 To 29/04/2020 00:00 Expected downtime 1h30 + 1h30 provision in case of rollback | After the 29/04/2020 00:00 |
|----------|-------------------|---|--|--|----------------------------|
| Pre-ops | NM22.0 | Available | Not available | Not available | Not available |
| | NM22.5 and NM23.x | Available | Available | Not available | Available |
| | NM24.0 | Not available | Available | Not available | Available |
| Ops | NM22.0 | Available | Available | Not available | Not available |
| | NM22.5 and NM23.x | Available | Available | Not available | Available |
| | NM24.0 | Not available | Not available | Not available | Available |

“Expected downtime x hours + y hours provision in case of rollback” means that the system or service will be unavailable minimum x hours and maximum up to (x + y) hours if a rollback to the previous version is required.

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4.3 Release NM24.0 content

4.3.1 Airport-Network Integration

| FB1027: AOP/NOP Integration - Phase IV | |
|---|--|
| Users impacted | U01. Flow Manager (FMP) U08. AO or CFSP U13. CDM-Airport |
| Application impacted | A05. Flow management systems (Predict, ETFMS) |
| Objective | Improvements to the Departure Planning Information (DPI) messages are identified based on experience acquired with A-CDM processes. As a result, the processing is continuously refined in coordination with the stakeholders. In the transition towards AOP-NOP data exchange, a change concerning the acceptance of the C-DPI message was proposed. |
| Description | CR_045109: Process C-DPI before EOBT - 3h A Cancel-DPI provided before the A-CDM horizon timeframe (EOBT – 3h) will be accepted and processed. The C-DPI will be accepted and processed even if it is the first DPI message provided by the A-CDM airport. No change will be made concerning the way the C-DPI is processed. On reception of the C-DPI, the flight is suspended and it is no longer reflected in the traffic demand. The airport may have advance information, from the aircraft operators, that certain flights will not operate. This CR is providing a mean to airports to pass this information to the Network Manager from as early as EOBT - 20h or, if the flight plan is filed later, as soon as the flight plan is filed. This will enable NM to update the traffic demand picture before the aircraft operator cancels the flight plan through a CNL message. |
| Impact for external users | I3. Impact on users' systems. |
| Impact description | CR_045109: Process C-DPI before EOBT - 3h Providing the C-DPI message earlier than EOBT - 3h is a requirement that would be enforced only for those airports wishing to advance their DPI messaging by setting up the AOP-NOP exchange connection with the network. Please note that the use of NM B2B Web Services is the recommended channel for the AOP-NOP data exchange. In this case, airports should include the reason "FLIGHT_CANCEL_IN_AODB" in the C-DPI message provided via B2B. Existing A-CDM airports will also have the possibility to provide early information on flights that would not operate. However, this requirement will not be mandatory unless the A-CDM airport is engaged in an ongoing AOP-NOP project with the NM. Existing A-CDM airports providing DPI messages via NM B2B Web Services will not be impacted by the change. |
| Service reference | Reception and distribution of real-time airport, air traffic control and surveillance data |
| Impact on Services Specifications | S1. The FB will not have any impact on the NM Services Specifications. |
| Operational deployment plan | D1. FB will be deployed in Operation along with the release migration. |
| Users' testing | O2: FB1027 will not be part of the NM Release OPT (Operational Testing Session) |

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| Documentation publication | DPI Implementation Guide |
| FB1066: Tower Update A-DPI evolution | |
| Users impacted | <p>U01. Flow Manager (FMP) U07. Post-ops analyst U12. Internal NM U13. CDM-Airport U15. Advanced ATC TWR Airport</p> |
| Application impacted | A05. Flow management systems (Predict, ETFMS) |
| Objective | <p>FB1066 delivers improvements to the Tower Update A-DPI message processing that enable its roll out to any A-CDM or Advanced ATC TWR airport interested to provide this message to NM, and therefore transitioning from the trial mode to stable operational use. Furthermore, it extends its possible use to enabling the TWR to request de-suspension for a flight that was suspended by Flight Activation Monitoring (FAM).</p> |
| Description | <p>CR_047510: Over-delivery check for TWRUPDATE A-DPI When TWR sends a TWRUPDATE A-DPI to request a CTOT extension for the flight, NM system checks several conditions before deciding to grant a 10 minutes extension or not. The purpose of this CR is to complement the existing conditions with an over-delivery check, by only granting the 10 minutes CTOT extension when there is a free slot within the next 20 minutes from the previous CTOT value. When no free slot is found within the next 20 minutes, the next available CTOT will be issued. Consequently, the number of times when the 10 minutes CTOT extension creates an over-delivery will be reduced. In practice, it is expected that an extension is granted in fewer cases than today, and in return, the TWR would receive the next available CTOT. When the latter occurs, the reason why the CTOT extension could not be granted will not be communicated to the TWR. Another change introduced by this CR is that the next available CTOT will be sent to TWR instead of a rejection message in the following cases:</p> <ul style="list-style-type: none"> • A CTOT has previously been granted to the flight, either automatically or manually; the error message "CTOT ALREADY EXTENDED" will be suppressed. • The limit of 3 granted CTOT extensions in the past rolling hour has been reached; the error message "HOURLY LIMIT FOR AUTOMATIC CTOT EXTENSIONS EXCEEDED" will be suppressed. <p>In all cases when the next available CTOT was sent in response to TWRUPDATE A-DPI, the flight will receive the REA status. Moreover, TWR would retain the possibility to request a CTOT improvement to NMOC.</p> <p>CR_047513: De-suspension rule via TWRUPDATE A-DPI TWR will have the possibility to send a TWRUPDATE A-DPI to request de-suspension of a flight that was suspended by FAM. Note that a classic A-DPI is rejected in this case. The CDM status "Actual Off-Block" will be kept when the flight is suspended by the airport (via C-DPI) or by FAM. When the flight is in CDM status "Actual Off-Block", only the TTOT value from the A-DPI is reset on reception of a C-DPI. A TWRUPDATE A-DPI message will be accepted only when the CDM status is "Actual Off-Block". If not, the message is rejected with "NOT REPORTED AS OFF BLOCK".</p> |
| Impact for external users | <p>I1. Impact on procedures. I2. Impact on Human-Machine interface. I3. Impact on users' systems.</p> |

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| Impact description | <p>Users who have updated their system to display the error messages on their HMI and / or have defined procedures based on these error messages may need to update their system / procedures due to some of those error messages no longer being output.</p> <p>Those five airports that are currently providing the TWRUPDATE A-DPI as part of a trial may notice a drop in the number of granted CTOT extensions. This impact will apply by default to new airports that will only start using the functionality after NM24.0. Post-implementation statistics will be performed to quantify the ratio of CTOT extensions vs. the number of times the next available CTOT is sent in response. These will be shared with the DPI Working Group.</p> <p>TWR should update their procedures if they wish to provide the TWRUPDATE A-DPI message to request de-suspension of a flight suspended by FAM.</p> <p>Airports wishing to provide the TWRUPDATE A-DPI message will need to contact the NM A-CDM team in order to plan an operational test intended to check whether the interaction between their system and the NM system behaves as expected. Following positive outcome of these tests, both parties should agree on a date to activate the TWRUPDATE A-DPI provision on a permanent basis.</p> |
| Service reference | Reception and distribution of real-time airport, air traffic control and surveillance data Airport Collaborative Decision Making |
| Impact on Services Specifications | S1. The FB will not have any impact on the NM Services Specifications. |
| Operational deployment plan | D1. FB will be deployed in Operation along with the release migration. |
| Users' testing | O2: FB1066 will not be part of the NM Release OPT (Operational Testing Session) |
| Documentation publication | ATFCM Operations Manual DPI Implementation Guide |

4.3.2 Airspace Management and Advanced FUA

| FB1064: ASM - Advanced FUA process improvement | |
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| Users impacted | U02. Airspace Manager (AMC) U08. AO or CFSP |
| Application impacted | A01. CHMI A03. CIAM A04. CACD A11. NM B2B |
| Objective | Following the request from several Member States for more flexibility and new capabilities to better apply the AFUA process, the objective of this FB, as part of the ASM-AFUA programme, is to increase system flexibility for further optimisation of airspace usage. |
| Description | <p>CR_042930: Area reservation outside the published times/vertical limits NM systems will allow airspace reservations outside the AIP published times/vertical limits according to temporary modifications published via NOTAM (via AUP/UUP mechanism). FUA Restrictions will apply to the modified limits. Automatic Route CDR expansion will apply to the modified limits. Temporary expansion of RSA limits will not modify the limits of the permanent RSA in CACD.</p> <p>CR_046917: NPZ processed via AUP/UUP</p> |

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| | <p>This CR will allow States or AMCs to process NPZ via AUP/UUP. No Planning Zones (NPZs) as a new airspace subtype were implemented (into CACD) with NM23.5. CR_046917 will enable NPZ management via AUP/UUP mechanism.</p> <p>In other words, after the implementation of this change request, NM system will allow Airspace Management Cells (AMCs) to process and notify daily activation of selected NPZs via AUP/UUP.</p> |
| Impact for external users | <p>I1. Impact on procedures. I2. Impact on Human-Machine interface. I3. Impact on users' systems.</p> |
| Impact description | <p>CR_042930: Area reservation outside the published times/vertical limits In CIAM, a new column "NOTAM check box" in RSA Allocation list will be created; if checked:</p> <ul style="list-style-type: none"> • The allocation can go outside the available Time and Levels • The NOTAM identification must be entered in the Remark field <p>In the NOP Portal:</p> <ul style="list-style-type: none"> • A NOTAM checkbox will be displayed in the EAUP/EUUP list. <p>Users will have to adapt their ASM tools as well as local procedures to process RSA according to NOTAM.</p> <p>CR_046917: NPZ processed via AUP/UUP In CIAM, AMCs will have a new airspace subtype to provide NPZ information to NM via AUP/UUP. The NPZ IDs will be displayed in the NOP Portal in RSA placeholder with associated restrictions. Users will have to adapt their ASM tools as well as local procedures to process the NPZ IDs with associated restrictions (at least one active by default). For NM B2B users, eAMI content will change as it is going to contain NPZ information.</p> |
| Service reference | <p>Airspace data Airspace management Collaboration Human Machine Interface Network Operations Portal Network Manager Business-to-business (B2B) web services</p> |
| Impact on Services Specifications | <p>S1. The FB will not have any impact on the NM Services Specifications.</p> |
| Operational deployment plan | <p>D1. FB will be deployed in Operation along with the release migration.</p> |
| Users' testing | <p>O1: FB1064 is planned to be part of the NM Release OPT (Operational Testing Session)</p> |
| Documentation publication | <p>FUA - AMC/CADF Operations Manual CHMI ASM Function Reference Guide NM B2B manuals NOP Portal Users Guide</p> |

4.3.3 CTM (Cooperative Traffic Management)

FB984: Network Impact Assessment / Best measures

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| Users impacted | <p>U01. Flow Manager (FMP) U08. AO or CFSP</p> |
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| | U12. Internal NM |
| Application impacted | A05. Flow management systems (Predict, ETFMS) A11. NM B2B |
| Objective | CR_047334: Interactive NIA Initiate the improvement of the Network Impact assessment display for NMOC both for simulation and for coordination (the iDAP workflows). CR_047335: Enhancement of NIA via B2B This CR is a first step in the improvement on the B2B NID (Network Impact Display) service: it will include flight based impact assessment information to the existing B2B NetworkImpactAssessmentRetrieval service. |
| Description | CR_047334: Interactive NIA Local simulations will be shared with NMOC. CR_047335: Enhancement of NIA via B2B New data will be made available via NM B2B for flight based impact assessment (slot improvement, exclusion) |
| Impact for external users | I1. Impact on procedures. |
| Impact description | The simulations done locally by FMP will be viewed on the NMOC displays. |
| Service reference | Network Manager Business-to-business (B2B) web services |
| Impact on Services Specifications | S0. Assessment to be performed or on-going. |
| Operational deployment plan | D1. FB will be deployed in Operation along with the release migration. |
| Users' testing | O1: FB984 is planned to be part of the NM Release OPT (Operational Testing Session) |
| Documentation publication | ATFCM Users Manual ATFCM Operations Manual NM B2B manuals |

FB987: STAM further developments

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|----------------------|---|
| Users impacted | U0. Other: Specific users of the feature |
| Application impacted | A02. CIAO A05. Flow management systems (Predict, ETFMS) A10. NOP Portal A11. NM B2B A14. n-CONNECT |
| Objective | The purpose of this Functional Block is to ease the STAM process. |
| Description | NM will provide the STAM measure ID in the RRP (B2B and AFTN), for the AUs to retrieve the rerouting constraints. This feature will be initially deployed with the NCAP tool (evolution of DSNA's CAP tool). For any rerouting proposal sent, NM will provide the measure ID via the NOP Portal flight list details and NM B2B. AUs will be able to retrieve the rerouting constraints and the reason for the type of rerouting proposal in the comment field of the RRP message via |

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| | <p>AFTN (for instance and in case of STAM measures, through the statement, "Purpose is STAM").</p> <p>Note that in case of STAM measures, this feature will be initially deployed within the context of STAM RRP process with the NCAP tool (evolution of DSNA's CAP tool), only targeting participant aircraft operators.</p> |
| Impact for external users | <p>I0. No impact</p> <p>I3. Impact on users' systems.</p> |
| Impact description | <p>Possible impact for external users is under assessment</p> <p>FB987 will impact only AOs participating to the initial operations of the STAM RRP process (with the NCAP tool). Other users will not be impacted.</p> <p>It will thus not be presented to the NM24.0 Presentation to externals (cf §4.2.2)</p> |
| Service reference | <p>Network operations monitoring and reporting</p> <p>Network Operations Portal</p> <p>Network Manager Business-to-business (B2B) web services</p> |
| Impact on Services Specifications | <p>S0. Assessment to be performed or on-going.</p> |
| Operational deployment plan | <p>D1. FB will be deployed in Operation along with the release migration.</p> |
| Users' testing | <p>O1: FB987 is planned to be part of the NM Release OPT (Operational Testing Session)</p> |
| Documentation publication | <p>ATFCM Users Manual</p> <p>NM B2B manuals</p> <p>NOP Portal Users Guide</p> <p>Re-Routing Opportunities - Information for Airspace Users (CHMI Version)</p> <p>Re-Routing Opportunities - Information for Airspace Users (NOP Version)</p> |

FB1070: Target Time improvements

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|----------------------|---|
| Users impacted | <p>U01. Flow Manager (FMP)</p> <p>U03. Airspace User (Civil)</p> <p>U07. Post-ops analyst</p> <p>U10. Non-CDM Airport</p> <p>U13. CDM-Airport</p> <p>U14. Air Navigation Service Provider (ANSP)</p> <p>U15. Advanced ATC TWR Airport</p> |
| Application impacted | <p>A05. Flow management systems (Predict, ETFMS)</p> <p>A07. Datawarehouse (NMIR)</p> <p>A10. NOP Portal</p> |
| Objective | <p>The objective of the FB is to provide to the user a way to inform NM when a flight's STAR is of type DCT.</p> |
| Description | <p>CR_047021: Implement STAR DCT in General Arrival Planning Information of the NM B2B service requests.</p> <p>NM will improve the Arrival Planning Information via B2B: it will be possible for users to inform NM that the terminal procedure of arrival is a DCT from the route to the ADES, via a specified point.</p> <p>This specified point can be:</p> <ul style="list-style-type: none"> • an intermediate point of the current STAR, • or an intermediate point of the route, |

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| | <ul style="list-style-type: none"> • or even an ad-hoc point, not part of the STAR definition or part of the route. |
| Impact for external users | I3. Impact on users' systems. |
| Impact description | <p>Under special arrangements, those users participating in arrival planning information exchange with NM may now include STAR DCT in their general Arrival Planning Information exchanged with NM.</p> <p>Special arrangements include trials or preparation activities leading to the future operational deployment of arrival planning information exchange with NM.</p> |
| Service reference | Reception and distribution of real-time airport, air traffic control and surveillance data Network Manager Business-to-business (B2B) web services Airport Capacity and Performance Airport Collaborative Decision Making Airport information management |
| Impact on Services Specifications | S0. Assessment to be performed or on-going. |
| Operational deployment plan | D1. FB will be deployed in Operation along with the release migration. |
| Users' testing | O1: FB1070 is planned to be part of the NM Release OPT (Operational Testing Session) |
| Documentation publication | <p>ATFCM Operations Manual (ATFCM Operations Manual will be updated to reflect future progress of AOP-NOP and extended AMAN projects)</p> <p>API Implementation Roadmap</p> <p>API Implementation Guide</p> |

FB1072: Predictability improvements

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|----------------------|---|
| Users impacted | <p>U1. Flow Manager (FMP)</p> <p>U3. Airspace User (Civil)</p> <p>U8. AO or CFSP</p> <p>U14. Air Navigation Service Provider (ANSP)</p> |
| Application impacted | <p>A01. CHMI</p> <p>A05. Flow management systems (Predict, ETFMS)</p> <p>A10. NOP Portal</p> <p>A11. NM B2B</p> |
| Objective | The objective of this FB is to facilitate improvements of existing Yo-Yo tool (identification of Yo-Yos in filed flight plans). |
| Description | <p>NM is committed to support the reduction of Yo-Yo flight plans.</p> <p>A Yo-Yo flight can be defined as following a vertical profile that is planned to (after reaching the initial top of the climb and before reaching the final top of descent during the cruising phase) descent certain amount of FLs and then climbs a certain amount of FLs.</p> <p>As from NM23.0, NM system is used for live Yo-Yo detection based on predefined detection parameters. Flight plans and change messages submitted are checked on Yo-Yo presence.</p> <p>When detected, the Yo-Yo information will be used by AOs and FMP in the CDM process in order to agree on actions:</p> <ul style="list-style-type: none"> • to refile flight plan without Yo-Yo profile • or to adhere to the flight plan with Yo-Yo profile |

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| | FB1072 will enable more precise filtering by NM systems of operationally critical Yo-Yo profile as it will include the length (of the distance between Yo-Yo Start and Yo-Yo End) in identification criteria. Yo-Yo information will be distributed through B2B. |
| Impact for external users | I1. Impact on procedures. I2. Impact on Human-Machine interface |
| Impact description | This FB will impact only users deciding to make use of the Yo-Yo information made available via NM B2B. |
| Service reference | Collaboration Human Machine Interface Network Operations Portal |
| Impact on Services Specifications | S1. The FB will not have any impact on the NM Services Specifications. |
| Operational deployment plan | D1. FB will be deployed in Operation along with the release migration. |
| Users' testing | O1: FB1072 is planned to be part of the NM Release OPT (Operational Testing Session) |
| Documentation publication | CHMI ATFCM Reference Guide NM B2B manuals NOP Portal Users Guide |

4.3.4 EAIMS (European ATM Information Management Service)

| FB1086: CACD validation of RAD | |
|---------------------------------------|---|
| Users impacted | U12. Internal NM U0. Other: National RAD Coordinator |
| Application impacted | A16. n-CONNECT: RAD@NES |
| Objective | FB1086 will validate the RAD restrictions against CACD data modifications (Present and future) and report affected Restrictions. |
| Description | As from NM24.0, the RAD data will be validated against present and the next future AIRAC. Any RAD restriction becoming invalid because of CACD data changes will be reported. RAD restrictions will be reported when incoherencies are detected and when potential implicit incoherencies are identified. When subsequently the RAD restrictions are modified, an incremental file will be generated. |
| Impact for external users | I1. Impact on procedures. |
| Impact description | RAD restrictions becoming incoherent or potentially invalid will be presented to the NRC who will have to define appropriate procedures to handle them. |
| Service reference | Airspace data |
| Impact on Services Specifications | S0. Assessment to be performed or on-going. |

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| Operational deployment plan | D1. FB will be deployed in Operation along with the release migration. |
| Users' testing | O1: FB1086 is planned to be part of the NM Release OPT (Operational Testing Session involving also the NRCs) |
| Documentation publication | Provision of CACD Data AD Operations Manual |

4.3.5 FPFDE (Flight Plan and Flight Data Evolution)

| FB1074: FF-ICE filing Function - file eFPL | |
|---|---|
| Users impacted | U03. Airspace User (Civil) U08. AO or CFSP U12. Internal NM |
| Application impacted | A06. FPL (IFPS) A11. NM B2B |
| Objective | The FB1074 implements features that couldn't be addressed with the initial FF-ICE Filing Service deployment in NM23.0. It is another incremental step towards full alignment with the ICAO FF-ICE Filing service specification. The FF-ICE will eventually replace the current ICAO procedures and processes for the filing of a flight plan, and provide the means for the exchange of flight plan data, including trajectory and aircraft performance. |
| Description | FB1074 will address the following topics: <ul style="list-style-type: none"> • Support of Planned Delay (equivalent of STAY / DLE) and OAT information in the 'structured' route elements; • Flight plan originator information (equivalent of ORGN in Item 18 of the FPL); • Implement departure and destination airport slot identification; • Support of IATA flight number. |
| Impact for external users | I1. Impact on procedures. I3. Impact on users' systems. |
| Impact description | External users of the FIXM services (over the NM B2B) will have to adapt their systems to be able to provide any of the elements listed above under Description, when submitting eFPLs (FF-ICE flight plans). |
| Service reference | Flight plan filing and management Network Manager Business-to-business (B2B) web services |
| Impact on Services Specifications | S0. Assessment to be performed or on-going. |
| Operational deployment plan | D1. FB1074 will be deployed in Operation along with the release migration. |
| Users' testing | O1: FB1074 will be part of the NM Release OPT (Operational Testing Session) on PREOPS |
| Documentation publication | IFPS Users Manual NM B2B manuals |

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4.3.6 Free Route Airspace (FRA)

| FB1041: FRA improvements - Activation | |
|--|--|
| Users impacted | U5. ENV data provider U12. Internal NM |
| Application impacted | A1. CHMI A4. CACD A15. n-CONNECT: AIRSPACE@NES |
| Objective | Objective of FB1041 is to allow the FRA data providers to transmit the FRA related data as a set of point usages and airspace or airspace border definitions only. It will also allow to generate and maintain in a computer assisted way the FRA restrictions from the point usages. |
| Description | The external users will no longer have to understand the complex restrictions data models. The FRA data providers can now transmit their FRA data as point usage data (Entry, Exit or Intermediate) referring to FRA airspaces and FRA airspace borders and align the usages in the 3 rd and 4 th dimension. With point usages Arrival and Departure, the use of the various points can be made exclusive for or limited to the traffic going to or coming from particular sets of aerodromes. Remark: From this data FRA restrictions will be generated and maintained in a computers assisted manner. Hence for the data consumers (AOs, CFSP etc...) the change is transparent. |
| Impact for external users | I1. Impact on procedures. I2. Impact on Human-Machine interface. |
| Impact description | The ENVCOORs and NRC involved in the definition of FRA data will see through the AIRSPACE@NES and the CHMI the point usage. If they prefer, FRA data can from NM24.0 onwards be transmitted as point usage data only. |
| Service reference | Airspace data |
| Impact on Services Specifications | S0. Assessment to be performed or on-going. |
| Operational deployment plan | D1. FB will be deployed in Operation along with the release migration. |
| Users' testing | O1: FB1041 is planned to be part of the NM Release OPT (Operational Testing Session) |
| Documentation publication | Provision of CACD Data AD Operations Manual |

| FB1084: FRA improvements | |
|---------------------------------|--|
| Users impacted | U1. Flow Manager (FMP) U7. Post-ops analyst U12. Internal NM |
| Application impacted | A4. CACD A5. Flow management systems (Predict, ETFMS) A7. Datawarehouse (NMIR) |

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| Objective | Update Traffic Volumes dynamically. |
| Description | <p>Traffic patterns can evolve during the operational day, in particular due to operational measures that have already been put in place to regulate them.</p> <p>Traffic volumes may have been incorrectly defined in the AIRAC and require updates. With NM23.5, Traffic volumes can only be renamed and recreated but not altered by live updates to adapt to new traffic flows.</p> <p>FB1084 will allow traffic volumes to be dynamically changed in ENV; the ETFMS regulations based on these traffic volumes will be re-evaluated.</p> |
| Impact for external users | I1. Impact on procedures. |
| Impact description | <p>When live updates to traffic volumes are enabled, ETFMS will automatically re-evaluate any regulations using the updated traffic volumes. Flights will be de-regulated and reregulated without intervention of the NMOC Flow Controllers and slots re-issued.</p> <p>Changes to the traffic volume input by CACD in the ENV system can potentially change the slot allocation of many flights in ETFMS without the interaction of the NMOC Flow Controllers so close cooperation between the two teams and possibly with the FMP involved will be essential.</p> <p>Attention must be paid to the training of the Operational staff to ensure that the update procedure and the impact on the operational traffic is understood.</p> |
| Service reference | <p>Network operations monitoring and reporting</p> <p>Airspace data</p> <p>Centralised secondary surveillance radar code assignment and management system</p> <p>Network Operations Portal</p> <p>Network Manager Business-to-business (B2B) web services</p> <p>Operations planning</p> |
| Impact on Services Specifications | S0. Assessment to be performed or on-going. |
| Operational deployment plan | D1. FB will be deployed in Operation along with the release migration. |
| Users' testing | O1: FB1084 is planned to be part of the NM Release OPT (Operational Testing Session) |
| Documentation publication | <p>ATFCM Operations Manual</p> <p>Provision of CACD Data</p> <p>AD Operations Manual</p> |

4.3.7 n-CONNECT

FB1095: RAD Full Completion

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|----------------------|---|
| Users impacted | <p>U5. ENV data provider</p> <p>U12. Internal NM</p> <p>U0. Other: National RAD Coordinator</p> |
| Application impacted | A16. n-CONNECT: RAD@NES |
| Objective | <p>FB1095 will provide an application which allows the National RAD coordinators (NRC) to define and maintain RAD restrictions and to interface with neighbouring NRCs and the NM RAD team.</p> <p>It will also provide allow the NM RAD team to consolidate the proposed RAD restrictions amendments and publish the RAD document.</p> |

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| Description | <p>FB1095 will replace the legacy RAD Excel spreadsheet by a tailored application that allow the NRC to store, maintain and edit its RAD restrictions. This will facilitate the coordination with neighboring states.</p> <p>It will automate the interfacing with the NM RAD team and allow the RAD team to consolidate the proposed RAD restrictions and publish the RAD document.</p> <p>At a later stage, RAD@NES will also allow to feed the CACD system in a computer assisted way with Restrictions.</p> |
| Impact for external users | <p>I1. Impact on procedures.</p> <p>I2. Impact on Human-Machine interface.</p> |
| Impact description | <p>NRC will have to update their procedures and use the new tool to provide RAD information to NM.</p> <p>Output (RAD Excel file) structure remains unchanged.</p> |
| Service reference | <p>Airspace data</p> <p>Collaboration Human Machine Interface</p> |
| Impact on Services Specifications | <p>S0. Assessment to be performed or on-going.</p> |
| Operational deployment plan | <p>D1. FB will be deployed in Operation along with the release migration.</p> |
| Users' testing | <p>O1: FB1095 is planned to be part of the NM Release OPT (Operational Testing Session)</p> |
| Documentation publication | <p>ATFCM Users Manual</p> <p>Provision of CACD Data</p> <p>AD Operations Manual</p> <p>n-CONNECT manuals</p> |

4.3.8 Operations Improvements

FB1042: ATFM messaging for AOs via B2B

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|----------------------|---|
| Users impacted | <p>U08. AO or CFSP</p> <p>U14. Air Navigation Service Provider (ANSP)</p> <p>U0. Other: NM B2B users</p> |
| Application impacted | <p>A05. Flow management systems (Predict, ETFMS)</p> <p>A11. NM B2B</p> |
| Objective | <p>Objective of FB1042 is to extend the reception and distribution of the ATFM information into the NM B2B services.</p> |
| Description | <p>CR_046808: Slot Related Messages on B2B</p> <p>The Annex J of the ATFCM Operations Manual describes the slot related messages generated by NM/AO and exchanged via AFTN/SITA.</p> <p>The information presented into the below messages will be included into the B2B services.</p> <p>Generated by NM:</p> <ul style="list-style-type: none"> • SAM (Slot Allocation Message) • SRM (Slot Revision Message) • SLC (Slot Cancellation message) • FLS (Flight Suspension Message) • DES (De-Suspension Message) • SIP (Slot Improvement Proposal Message) |

NETWORK MANAGER RELEASE NOTES

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| | <ul style="list-style-type: none"> • RRP (Rerouting Proposal Message) • RRN (Rerouting Notification Message) • ERR (Error Message) <p>Generated by AOs:</p> <ul style="list-style-type: none"> • REA (Ready Message) and FCM (Flight Confirmation Message) • SMM (Slot Missed Message) • SPA (Slot Improvement Proposal Acceptance Message) • SRJ (Slot Proposal Rejection Message) • SWM (SIP Wanted Message (RFI is set to 'no')) • RFI (Ready For Improvement (after SWM)) |
| Impact for external users | I3. Impact on users' systems. |
| Impact description | <p>The input of the SMM, SPA, SRJ, SWM, RFI, REA, RJT type messages will be addressed using the NM B2B Request/Reply service, under a new subtype called ATFMRequest (to be confirmed).</p> <p>The output messages in NM B2B is the P/S services.</p> <p>In particular, the PSFD (Publish/Subscribe Flight Data message) is used to inform the NM B2B users about changes to the flight data, and it already contains most of the flight fields used in the ATFM output messages. The information present in the SAM, SRM, SLC, FLS, DES, SIP, RRP, RRN, ERR will be found under the PSFD.</p> <p>The ETFMS Flight Data (EFD) messages could contain another Event Type "RRM". This new event means Rerouting Proposal Creation and is triggered by a Rerouting Proposal (RRP) or Rerouting Notification (RRN) message.</p> <p>Example:</p> <p>-TITLE EFD -TIMESTAMP 191218020000 -EVENT RRM -EVENTCLASS MSG -FLTSTATE FS </p> |
| Service reference | Network Manager Business-to-business (B2B) web services |
| Impact on Services Specifications | S1. The FB will not have any impact on the NM Services Specifications. |
| Operational deployment plan | D1. FB will be deployed in Operation along with the release migration. |
| Users' testing | O1: FB1042 is planned to be part of the NM Release OPT (Operational Testing Session) |
| Documentation publication | ATFCM Users Manual ATFCM Operations Manual NM B2B manuals |
| I2_118832: Retrieving original ADES for diverted flight via B2B | |
| Users impacted | U08. AO or CFSP U14. Air Navigation Service Provider (ANSP) U0. Other: Any B2B user |

NETWORK MANAGER RELEASE NOTES

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| Application impacted | A11. NM B2B |
| Objective | Retrieve via NM B2B the original ADES for a diverted flight |
| Description | <p>I2_118832: Retrieving original ADES for diverted flight via B2B</p> <p>With the I2_118832, a fix is delivered to be able to indicate the original filed aerodrome of destination in case the flights was diverted.</p> <p>In the NM B2B Flight service, the flight.flightId.keys. aerodromeOfDestination will contain always the original filed ADES.</p> <p>In case of diversion, the below fields will complete the flight information.</p> <ul style="list-style-type: none"> • The flight.flightId.keys.aerodromeOfDestination is always: <ul style="list-style-type: none"> ○ The original filed ADES. • The flight.divertedAerodromeOfDestination is always: <ul style="list-style-type: none"> ○ the diverted ADES if the flight was diverted ○ not present if the flight was not diverted |
| Impact for external users | I3. Impact on users' systems. |
| Impact description | Content of existing fields will be modified with NM24.0. |
| Service reference | Network Manager Business-to-business (B2B) web services |
| Impact on Services Specifications | S1. The I2 will not have any impact on the NM Services Specifications. |
| Operational deployment plan | D1. I2 will be deployed in Operation along with the release migration. |
| Users' testing | O1: I2_118832 is planned to be part of the NM Release OPT (Operational Testing Session) |
| Documentation publication | NM B2B manuals |

FB1059: ATFCM Domain improvements

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|----------------------|---|
| Users impacted | <p>U1. Flow Manager (FMP)</p> <p>U8. AO or CFSP</p> <p>U10. Non-CDM Airport</p> <p>U13. CDM-Airport</p> <p>U15. Advanced ATC TWR Airport</p> <p>U12. Internal NM</p> <p>U14. Air Navigation Service Provider (ANSP)</p> |
| Application impacted | <p>A1. CHMI</p> <p>A2. CIFLO, CIAO, CITO</p> <p>A5. Flow management systems (Predict, ETFMS)</p> <p>A10. NOP Portal</p> <p>A11. NM B2B</p> |

NETWORK MANAGER RELEASE NOTES

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| Objective | Objective of FB1059 is to indicate the diversion of a flight if a different aerodrome of destination (from the original filed aerodrome of destination) is received in the CPR (Correlated Position Report) messages. |
| Description | <p>CR_046613: Flag diverted flights from the CPRs information</p> <p>Today, the diversion is indicated and shared only after a Div_ACH or a Div_ARR is received (messages received by IFPS and forwarded to ETFMS).</p> <p>Not all ATM systems are able to send Div_ACH. Therefore, in most of the cases the diversion is already indicated directly through the FSA/CPRs received directly on ETFMS.</p> <p>With NM24.0, ETFMS is able to identify the different ADES (compared with the original filed ADES) from the CPR messages and set the flight as diverted. The diversion will be visible on CHMI and NOP applications and provided via NM B2B webservices.</p> <p>Reminder: in CHMI and NOP applications, the Flight List could indicate the diversion in the "D" column (by the sign '>'). As well, in case of diversion, the Flight Data will contain the diverted aerodrome (under 'ADES' field) and the original filed ADES (under the 'Filed ADES' field).</p> |
| Impact for external users | I0. No impact. |
| Impact description | The diversion will be triggered by the reception of the Div_ACH, Div_ARR and, with NM24.0, by the information received in the CPRs when the ADES will differ from the original filed ADES. |
| Service reference | Flight plan filing and management Reception and distribution of real-time airport, air traffic control and surveillance data |
| Impact on Services Specifications | S1. The FB will not have any impact on the NM Services Specifications. |
| Operational deployment plan | D1. FB will be deployed in Operation along with the release migration. |
| Users' testing | O1: FB1059 is planned to be part of the NM Release OPT (Operational Testing Session) |
| Documentation publication | ATFCM Users Manual ATFCM Operations Manual IFPS Users Manual Flight Progress Messages Document |

FB1085: eHelpDesk improvements

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|----------------------|--|
| Users impacted | <p>U01. Flow Manager (FMP)</p> <p>U07. Post-ops analyst</p> <p>U08. AO or CFSP</p> <p>U10. Non-CDM Airport</p> <p>U12. Internal NM</p> <p>U13. CDM-Airport</p> <p>U15. Advanced ATC TWR Airport</p> |
| Application impacted | A05. Flow management systems (Predict, ETFMS) |
| Objective | Following the successful implementation of the eHelpDesk service with NM23.0 and NM23.5, NMOC is continuing to improve the eHelpDesk service. Main objective is to digitalize the incoming requests to the NMOC what will lead to better service and more time for NMOC to focus on network critical issues. |

NETWORK MANAGER RELEASE NOTES

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| | <p>With last summer changes, the number of phone calls to the NMOC has significantly decreased, and the outcome is more availability of the phone line for critical requests.</p> <p>With NM24.0, Airline Operators will have the possibility to flag their flights as critical which will ensure that they will be highlighted to the NMOC staff.</p> <p>Flights in Ready status will be highlighted while in the queue.</p> |
| Description | <p>CR_047330: Flight Criticality indicator</p> <p>Airline operators will have the possibility to flag eHelpDesk request as critical. Critical requests will not be subject to automatic processing rules, and will be highlighted to the NMOC staff when processing. Airline operator will have limited number of these requests, depending on the number of filed flight plans during the day of operations.</p> <p>CR_047008: Highlighting of REA flights.</p> <p>Flights that are in "Ready" status will be marked in the queue. (only HMI impact, these requests will be processed as any other)</p> |
| Impact for external users | <p>I1. Impact on procedures.</p> <p>I2. Impact on Human-Machine interface.</p> |
| Impact description | <p>Mostly HMI impact (highlighting REA and critical flights), but also new input mechanism for highlighting of the critical flights. They will be further explained during the NMOC release presentations and later versions of NM release notes.</p> |
| Service reference | <p>Network Operations Portal</p> |
| Impact on Services Specifications | <p>S0. Assessment to be performed or on-going.</p> |
| Operational deployment plan | <p>D1. FB will be deployed in Operation along with the release migration.</p> |
| Users' testing | <p>O1: FB1085 is planned to be part of the NM Release OPT (Operational Testing Session)</p> |
| Documentation publication | <p>ATFCM Users Manual ATFCM Operations Manual NOP Portal Users Guide</p> |

CR_047018: Flight Efficiency Initiative

| | |
|----------------------|--|
| Users impacted | <p>U3. Airspace User (Civil) U8. AO or CFSP</p> |
| Application impacted | <p>A1. CHMI A10. NOP Portal</p> |
| Objective | <p>The objective of this CR is to improve the alerting of GRRT users when the tool calculates an alternative route in scheduled runs.</p> |
| Description | <p>Before NM24.0 Release, information stored in the OPP column of the CHMI or NOP Portal flight lists was not reflecting the latest (scheduled) GRRT calculation.</p> <p>Whenever GRRT would identify an alternative route, this information would be stored in CHMI or NOP Portal OPP column. However, if in the following run(s) no alternative route was found, OPP column would still keep indication generated in the previous run in which an alternative was highlighted.</p> <p>With this improvement, the user will only see the latest outcome of the GRRT calculations.</p> <p>NOTE: CHMI Archive data will store only the last status of the OPP column.</p> |

NETWORK MANAGER RELEASE NOTES

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| Impact for external users | I0. No impact. |
| Impact description | This CR will improve the user experience by providing more up to date GRRT calculations in the CHMI or NOP Portal. As this CR will have no impact on the users' Procedures and user interfaces, it will not be presented as the Release presentation (§4.2.2). |
| Service reference | Collaboration Human Machine Interface Network Operations Portal |
| Impact on Services Specifications | S0. Assessment to be performed or on-going. |
| Operational deployment plan | D1. CR will be deployed in Operation along with the release migration. |
| Users' testing | O1: CR_047018 is planned to be part of the NM Release OPT (Operational Testing Session) |
| Documentation publication | Network Operations - Flight Efficiency User Manual |

5 Documentation

Network Operations Handbook

| | |
|---|---|
| Network Operations library | https://www.eurocontrol.int/library?f%5B0%5D=activity%3A774 |
| ATFCM Users Manual | https://www.eurocontrol.int/publication/atfcm-users-manual |
| ATFCM Operations Manual | https://www.eurocontrol.int/publication/atfcm-operations-manual |
| NM B2B documentation | https://ost.eurocontrol.int/sites/B2BWS/default.aspx Registration required - contact NM.servicerequests@eurocontrol.int |
| CCAMS User Manual | https://www.eurocontrol.int/publication/ccams-user-manual |
| IFPS Users Manual | https://www.eurocontrol.int/publication/ifps-users-manual Flight Plan guide: https://contentzone.eurocontrol.int/fpl/default.aspx |
| Flight Plan Guide and IFPS errors guide | https://contentzone.eurocontrol.int/fpl/default.aspx |
| NMIR Users Guide | https://www.eurocontrol.int/publication/nmir-users-guide |

6 ABBREVIATIONS

| | |
|--------|---|
| ACC3 | Air Cargo or Mail Carrier operating into the Union from a Third Country Airport |
| A-CDM | Airport-Collaborative Decision Making |
| ACK | IFPS Acknowledgement Message |
| AD | Airspace Data |
| ADES | Aerodrome of Destination |
| A-DPI | Airport-Departure Planning Information |
| AFTN | Aeronautical Fixed Telecommunication Network |
| AFUA | Advanced Flexible Use of Airspace |
| AIP | Aeronautical Information Publication |
| AIRAC | Aeronautical Information, Regulation and Control |
| AIS | Aeronautical Information Services |
| AIXM | Aeronautical Information Exchange Model |
| AMAN | Arrival Manager |
| AMC | Airspace Management Cell |
| ANSP | Air Navigation Service Provider |
| AO | Aircraft Operator |
| AOP | Airport Operations Plan |
| API | Arrival Planning Information |
| APOC | Airport Operations Centre |
| ARO | Air Traffic Services Reporting Office |
| ASM | Airspace Management |
| ATC | Air Traffic Control |
| ATFCM | Air Traffic Flow and Capacity Management |
| ATFM | Air Traffic Flow Management |
| ATM | Air Traffic Management |
| ATS | Air Traffic Services |
| AU | Airspace User |
| AUP | Airspace Use Plan |
| B2B | Business-to-Business |
| B2C | Business-to-Consumer |
| CAA | Civil Aviation Authority |
| CACD | Central Airspace and Capacity Database (new name of ENV) |
| CADF | ECAC Centralized Airspace Data Function |
| CAP | Collaborative Advance Planning (DSNA tool) |
| CASA | Computer Assisted Slot Allocation |
| CASTAR | Computer Aided Synchronization Tool for Airspace Repositories |
| CCAMS | Centralised SSR Code Allocation & Management |
| CDM | Collaborative Decision Making |
| C-DPI | Cancel-Departure Planning Information |
| CDR | Conditional Route |
| CFSP | Computerised flight plan service provider |
| CHG | Modification Message |
| CHMI | Collaboration Human Machine Interface |

NETWORK MANAGER RELEASE NOTES

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|-------------|---|
| CIAM | Collaboration Interface for AMCs |
| CIAO | Collaboration Interface for AO |
| CIFLO | Collaboration Interface for Flow management position |
| CITO | Collaboration Interface for Tower |
| CNL | Cancellation Message |
| CNS | Communications, Navigation, Surveillance |
| CPA | Collaboration Portal Application |
| CPR | Correlated Position Report |
| CR | Change Request |
| CSST | Call-Sign Similarities Tool |
| CTM | Cooperative Traffic Management |
| CTOT | Calculated Take-Off Time |
| CUA | Common User Access |
| DCT | Direct Route |
| DES | De-Suspension Message |
| DLA | Delay or Delay Message |
| DLE | Delay or holding on route |
| DPI | Departure Planning Information |
| DSNA | Direction des Services de Navigation Aérienne |
| DWH | Data Warehouse system |
| EAIMS | European ATM Information Management Service |
| EASA | European Aviation Safety Agency |
| EAUP | European Airspace Use Plan |
| EFD | ETFMS Flight Data |
| eFPL | FF-ICE flight plan |
| ENV | NM Environment System (former name of CACD) |
| ENVCOOR | National Environment Coordinator |
| EOBT | Estimated Off Block Time |
| ERR | Error Message |
| ETFMS | Enhanced Tactical Flow Management System |
| EUROCONTROL | European Organization for the Safety of Air Navigation |
| EUUP | European Update airspace Use Plan |
| FAAS | Flight Assessment and Alert System |
| FAM | Flight Activation Monitoring |
| FB | Functional Block |
| FCM | Flight Confirmation Message |
| FF-ICE | Flight and Flow Information for a Collaborative Environment |
| FIXM | Flight Information Exchange Model |
| FL | Flight Level |
| FLS | Flight Suspension Message |
| FMP | Flow Management Position |
| FPFDE | Flight Plan and Flight Data Evolution |
| FPL | Flight Plan message (ICAO format) |
| FRA | Free Route Airspace |
| FSA | First System Activation message |

NETWORK MANAGER RELEASE NOTES

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|-----------|--|
| FUA | Flexible Use of Airspace |
| GRRT | Group Re-Routing Tool |
| HMI | Human-Machine Interface |
| I2 | Incident Type 2 |
| IAF | Initial Approach Fix |
| IAP | Instrument Approach Procedure |
| IATA | International Air Transport Association |
| ICAO | International Civil Aviation Organization |
| ID | Identifier |
| IFPS | Integrated Initial Flight Plan Processing System |
| IFPUV | IFPS Unit for Validation |
| IR | Implementing Rule |
| M&R | Monitoring and Reporting |
| MSG | Message |
| NCAP | Network Collaborative Advance Planning (DSNA tool) |
| n-CONNECT | network-COMMON Enhanced Collaborative ATM |
| NES | n-CONNECT Eco System |
| NIA | Network Impact Assessment |
| NID | Network Impact Display |
| NM | Nautical Mile |
| NM | Network Manager |
| NMD | Network Manager Directorate |
| NMIR | NM Interactive Reporting |
| NMOC | Network Manager Operations Centre |
| NMVP | Network Manager Validation Platform |
| NOP | Network Operations Plan |
| NOP | Network Operations Portal |
| NOTAM | Notice to Airmen |
| NPP | Network Performance Plan |
| NPZ | No Planning Zone |
| NRC | National RAD Coordinator |
| NSP | Network Strategy Plan |
| OAT | Operational Air Traffic |
| ODSG | Operations and Development Sub-Group |
| OPP | Opportunity |
| OPS | Operations |
| OPT | Operational testing |
| ORGN | Originator |
| P/S | NM B2B Publish/Subscribe |
| PC | Personal Computer |
| PC | Provisional Council |
| PM | Post Meridiem |
| PREDICT | Variant of TACT used for Pre-Tactical Work |
| PSFD | Publish Subscribe Flight Data (NM B2B) |
| R&D | Research and Development |

NETWORK MANAGER RELEASE NOTES

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|-------|--|
| RAD | Route Availability Document |
| REA | Ready Message |
| RFI | Ready For Improvement Message |
| RJT | Rerouteing Rejection message |
| RQS | Requested Supplementary Information Message |
| RRM | Rerouting Proposal Creation |
| RRN | Rerouteing Notification Message |
| RRP | Rerouting Proposal Message |
| RSA | Restricted Airspace |
| RWY | Runway |
| SAFA | Safety Assessment of Foreign Aircraft (Programme) |
| SAM | Slot Allocation Message |
| SES | Single European Sky |
| SESAR | Single European Sky ATM Research |
| SID | Standard Instrument Departure |
| SIP | Slot Improvement Proposal Message |
| SITA | Société Internationale de Télécommunications Aéronautiques |
| SLC | Slot Cancellation message |
| SMM | Slot Missed Message |
| SO | Strategic Objective |
| SPA | Slot Improvement Proposal Acceptance Message |
| SRJ | Slot Proposal Rejection message |
| SRM | Slot Revision Message |
| STAM | Short-Term ATFM Measures |
| STAR | Standard Terminal Arrival Route |
| SWIM | System-Wide Information Management |
| SWM | SIP Wanted Message |
| TCF | Transponder Code Function |
| TITLE | Message Name |
| TLP | Traffic Light Protocol |
| TTOT | Target Take Off Time |
| TWR | Aerodrome Control Tower |
| UTC | Coordinated Universal Time |
| UUP | Updated Airspace Use Plan |
| VFR | Visual Flight Rules |



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