



Network Manager
nominated by
the European Commission



Current NM B2B Web Services

NM B2B Web Services Technical Forum 5.0
11/12 June 2018

Web Service Usage

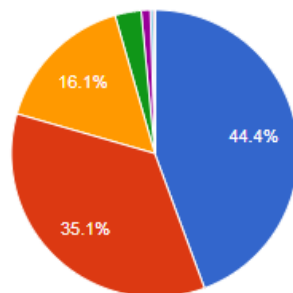
DETAILED REPORT - May 2018 OPS

172 76 M 203 M

Active Users R/R Requests P/S Messages

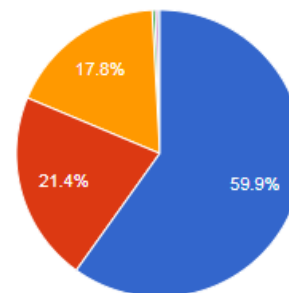
Load Per Organisation Type

R/R



- Industry and Services
- ANSP
- Airport
- Aircraft Operator
- Handling Agent
- Government Body
- International Organisation
- Other

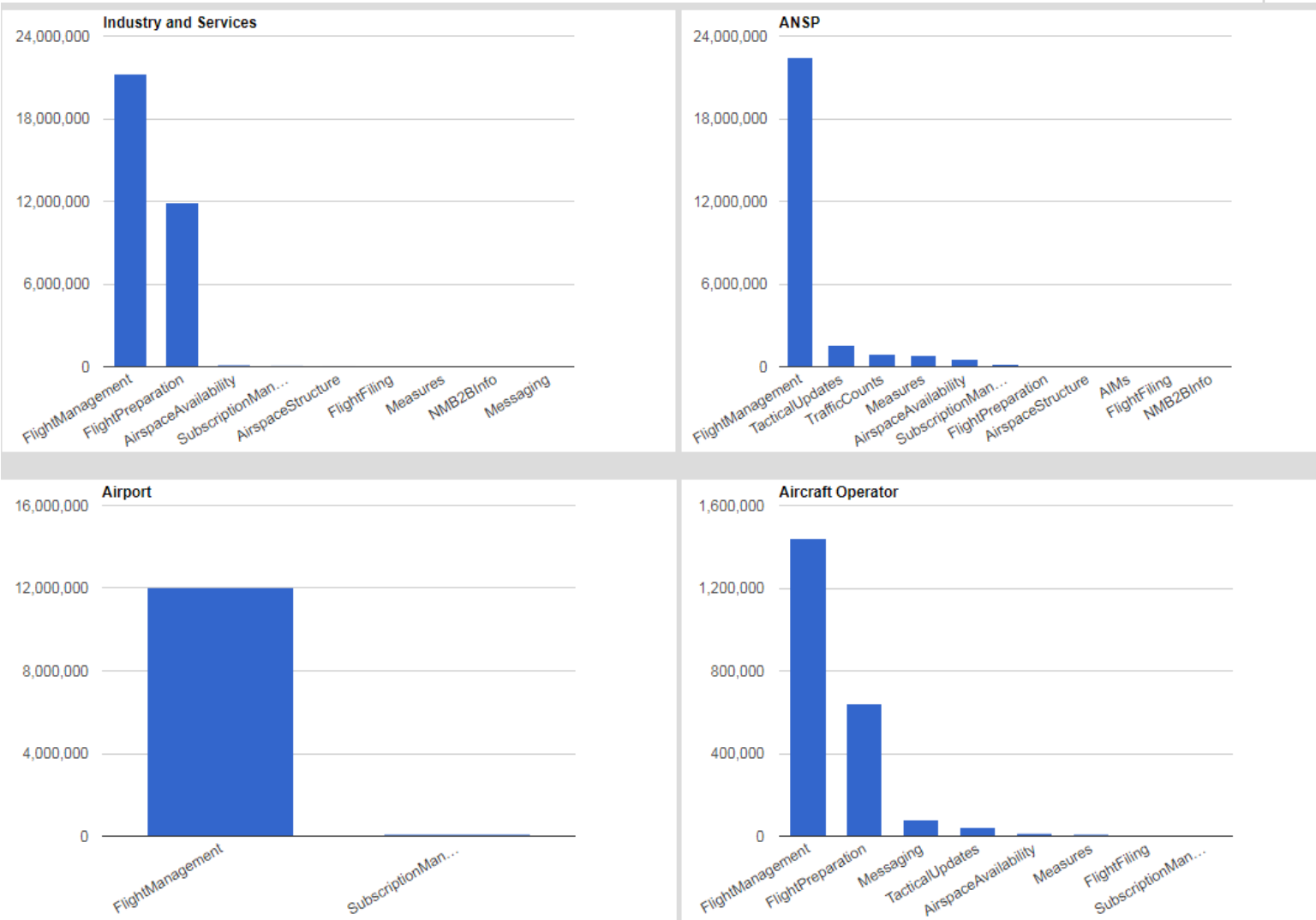
P/S



- Industry and Services
- ANSP
- International Organisation
- Unknown
- Aircraft Operator
- Airport

Usage in the last 12 months

Web Service Usage



NM B2B Web Services – Service Groups

General Information

Airspace

Flight

Flow

Publish/Subscribe

Airspace Availability

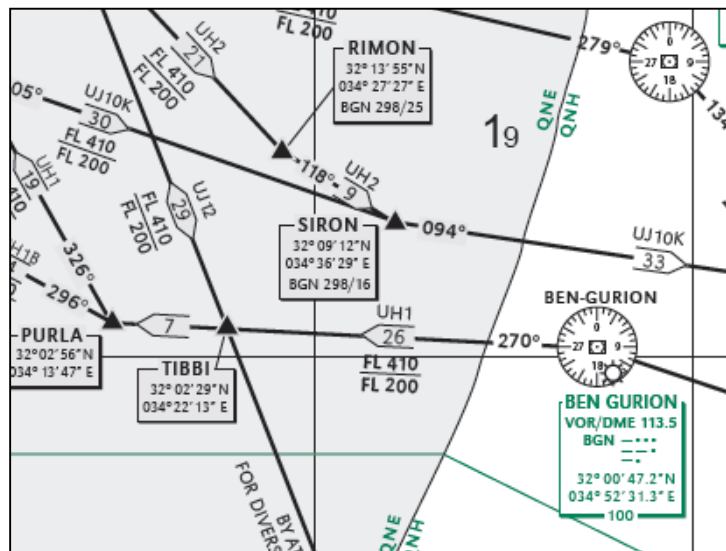
Access to EAUP/EUUP information

Route ID	Between	And	MNM FL	MAX FL	WEF	TIL	FIR
B600	GDV	ROYAL	085	245	19:30	21:30	GCCC
B825	CABOJ	LPC	065	245	19:30	21:30	GCCC
G851	LOMAS	CABOJ	065	245	19:30	21:30	GCCC
L29	OLKIN	GRUDA	125	155	22:00	02:00	EPWW
L607	SUXIM	ROPUV	055	105	07:00	15:00	EDGG
L607	LNO	SUXIM	065	105	07:00	15:00	EBBU, ED
L621	SOMOR	DEVEL	095	155	22:00	02:00	EPWW

RSA	MNM FL	MAX FL	WEF	UNT	FIR
EHD41A	000	055	06:00	06:00	EHAA
EHD42	000	660	06:00	06:00	EHAA
EHD49	000	999	06:00	06:00	EHAA
EHR1A	000	195	06:00	06:00	EHAA
EHR1B	000	025	06:00	06:00	EHAA
EHR2	000	115	06:00	06:00	EHAA
EHR2A	000	195	06:00	06:00	EHAA
EHR2B	010	025	06:00	06:00	EHAA

Airspace Structure

Operational data used by the NM Flight and Flow systems derived from the AIP and RAD documents.



AIRWAY	FROM	TO	Point or Airspace	
UP994	LOMRO	DE TSA		Not available for traffic 1. ARR LDM*, LIP* 2. Via M/UM984 BAKOR
Q102	KFT	VIW		Not available for traffic Except 1. DEP L/LAFIR, LDZA 2. ARR LOVVFIR, LIPAPQ
Q102	RTT	VIW		Only available for traffic 1. ARR LOWK 2. DEP LOWI
Q102	VIW	NOKDA		Not available for traffic 1. Via Q100 RASTA/ARNOS 2. DEP L/LJ Except ARR LOWI

Flight Preparation

Flight Plan Validation

Data Entry

[Validate](#)

FPL Data:

```
(FPL-B2B001-IS
-B738/M-SDE2E3FGU1RWY/LB1
-EHAM0455
-N0444F390 WOODY1W WOODY UN872 KOVIN UM728 RESMI UN857
ENSAC UP181 BTZ/N0437F330 UP181 NEA UN864 ORBIS
-LEMD0157 LEVC
-PBN/B1D1 REG/B2BAA EET/EBUR0012 LFFF0019 LECM0117
CODE/484558 OPR/B2B RVR/200)
```

Validation Results

NO ERRORS

Original Route

Length	Duration	Route
911.00	02:11	N0444F390 WOODY1W WOODY UN872 KOVIN UM728 RESMI ENSAC UP181 BTZ/N0437F330 UP181 NEA UN864 ORBIS

Proposed Routes

ID	Length	Diff Length	Duration	Diff Duration	Route
1	915.00	4 (0%)	02:12	+00:01 (1%)	N0444F390 WOODY UN872 TERPO UT
2	918.00	+7 (1%)	02:12	+00:01 (1%)	N0444F390 WOODY UN872 PON UT300 UN864 ORBIS
3	920.00	+9 (1%)	02:13	+00:02 (2%)	N0444F390 WOODY UN872 DITAL UN4 UN864 ORBIS
4	924.00	+13 (1%)	02:13	+00:02 (2%)	N0444F390 WOODY UN872 INBAB UN8
5	936.00	+25 (3%)	02:15	+00:04 (3%)	N0444F390 WOODY UN872 ERIGA UNT

Flight Filing

- Flight Plan Message Filing
 - Flight Plan Creation
 - Flight Plan Update
 - Flight Plan Cancelation
 - Flight Delay
 - Flight Departure
 - Flight Arrival

- Filing Status

Department of Transportation
Federal Aviation Administration

International Flight Plan

PRIORITY: << FF → ADDRESS(S):

FLYING TIME: _____ ORIGINATOR: << >>

SPECIFIC IDENTIFICATION OF ADDRESSEE(S) AND/OR ORIGINATOR:

3 MESSAGE: << FPL → 7 AIRCRAFT IDENTIFICATION: _____ 8 FLIGHT RULES: _____ TYPE OF FLIGHT: _____

4 NUMBER: _____ 5 TYPE OF AIRCRAFT: _____ 6 WAKE TURBULENCE CAT.: _____ 10 EQUIPMENT: << >>

13 DEPARTURE AERODROME: _____ 14 TIME: _____ 15 CRUISING SPEED: _____ 16 LEVEL: _____ 17 ROUTE: _____

18 DESTINATION AERODROME: _____ TOTAL EST. (HR. MIN.): _____ 19 ALTN AERODROME: _____ 20 2ND. ALTN AERODROME: << >>

21 OTHER INFORMATION: _____

SUPPLEMENTARY INFORMATION (NOT TO BE TRANSMITTED IN FPL MESSAGES):

22 ENDURANCE (HR. MIN.): _____ 23 PERSONS ON BOARD: _____ 24 EMERGENCY RADIO: (HF) (V) (E)

25 SURVIVAL EQUIPMENT: (S) (P) (D) (M) (J) (L) (F) (U) (V)

26 DINGHIES: (D) (C) (COLOUR): _____

27 AIRCRAFT COLOUR AND MARKINGS: _____

28 REMARKS: _____

29 PILOT-IN-COMMAND: _____

FILED BY: _____ ACCEPTED BY: _____ ADDITIONAL INFORMATION: _____

Flight Management

- Flight Plan List
- Flight List. By:
 - Keys
 - AO
 - Aerodrome
 - Airspace
 - Point
 - Traffic Volume

	TOT/TA	STA	ARCID	ATYP	ADEP	ADES	D	T	ARF	IOBT	U	E/CTOT
<input type="checkbox"/>	▶ 01:02A	LU	BAW239	B772	EGLL	KBOS		E	400	22-18:25		18:49E
<input type="checkbox"/>	▶ 01:10A		AFR333	B744	KBOS	LFPG		E	390	23-00:45		01:05E
<input type="checkbox"/>	▶ 01:17A	LF	EIN138	A332	KBOS	EIDW		E	390	23-01:00		01:20E
<input type="checkbox"/>	▶ 01:43A	LF	BAW214	B772	KBOS	EGLL		E	390	23-01:35		01:55E
<input type="checkbox"/>	▶ 01:46A		SWR53P	A333	KBOS	LSZH		E	400	23-01:45		02:05E
<input type="checkbox"/>	▶ 02:14A	LF	VIR12E	A333	KBOS	EGLL		E	380	23-01:40		02:00E
<input type="checkbox"/>	▶ 02:30A	LF	DLH421	A346	KBOS	EDDF		E	380	23-02:15		02:35E
<input type="checkbox"/>	▶ 02:39A		AZA66Y	A332	KBOS	LIRF		E	410	23-02:40		03:00E
<input type="checkbox"/>	▶ 02:52A	LU	RZO220	A310	KBOS	LPPD		E	360	23-02:40		03:00E
<input type="checkbox"/>	▶ 03:21A		UAE238	B77L	KBOS	OMDB		A	390	23-03:15		03:35E
<input type="checkbox"/>	▶ 12:20A	LF	BAW29G	B772	KBOS	EGLL		A	390	23-12:10		12:30E

- Flight Retrieval

Details	Point Profile: Elapsed Flying Time	Point Profile: Actual Time	Airspace Profile: Elapsed Flyin
Flight History	Operational Log	Alternate Routes	Restriction Profile: Elapsed Flying Time
AO AZA		Aircraft Type A	
OPR AO AZA		Initial RFL 3	
Last MSG From AFTN:EGGXZOX		Registration Mark E	
Last EOBT 23-02:40			
ETOT 03:00			
CTOT			
ATOT 02:39			
Flight Type Terminated		Late Filer N	
RFI Y		REA N	
Airport Type Standard		Ai	
Status		SID	
onal info			

Flow Services

Updates to Capacity Plan, Sector Configuration, Runway Configuration, OTMV, Traffic Volumes and Hotspots. Regulation proposals.



Latest Developments

- Airborne message reception (APR, MFS, FNM)
 - communicate an actual position (ATO) or an estimated time of arrival (ETA).
 - NM strategy to implement all airborne messages currently sent via AFTN and SITA Type B networks via B2B
- Arrival Planning Information messages
 - Solving hotspots for flights at arrival airports
- NIA information provided in flight lists
 - Gives a view to assess network impact of applied measures
- Extended Departure Planning Information concept
 - Extend collaboration between airport operations and network operations (ATM Masterplan rolling NOP).

Publish Subscribe

AIXM Datasets

ATFCM Regulations

EAUP/EUUP


ATM Information

Flight Data

Flight Plans

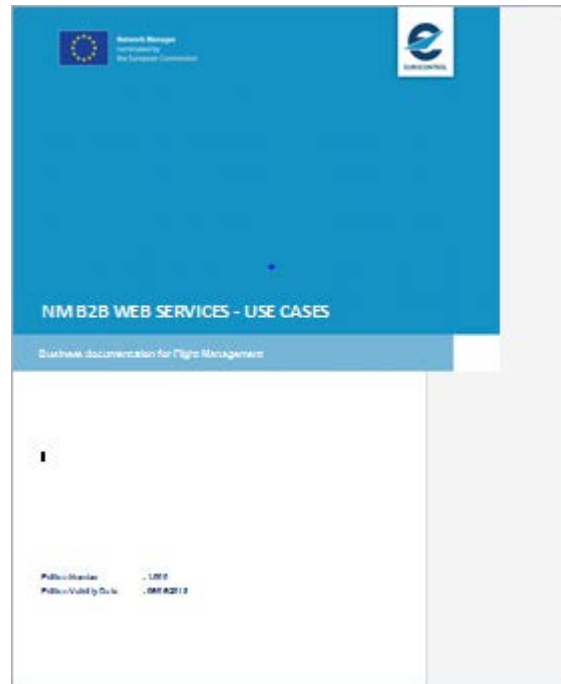
NM B2B Documentation

Directorate Network Management




NM 20.5.0 - NOP/B2B Reference Manuals - Essentials

Edition No. : 20.5.0.4.50
Edition Issue Date : 04/11/2016
Author : NM NOP/B2B Team
Reference : B2B/20.5.0/Essentials
Copy No. : ← stamp here



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NIM B2B WEB SERVICES - USE CASES

Dashboard documentation for Flight Management

Public Number : 1.000
Public Validity Date : 04/11/2016



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REGULATION PROPOSALS VIA B2B

User Class

Revision Number : 1.1
Revision Validity Date : 20032017

Publish Subscribe Use cases

- Versatile solution with configurable message filtering and payload (Message Content)
- Supports AFTN message type distribution (e.g FUM and EFD)
- PSFD messages pushed to client, more efficient than EFD
- P/S can be viewed as a backup or replacement to AFTN

Flight Plan Messages : use case

- Objective: ACC receiving Flight Plan messages (FIXM or NM_B2B payload) for flights expected to cross its airspace.
 - Synchronise from NM : Retrieve flight lists on airspace of interest.
 - For each flight retrieve the Flight data and populate client db, allows to retrieve data transmitted prior to connecting to P/S.
 - Create FLIGHT_PLAN subscription with a message filter containing arrival events and message payload configuration (NM_B2B or FIXM).
 - PSFPL message filter events (AFP, ARR, CHG, CNL, DEP, DLA, FNM, FPL, MFS, REVAL)
 - Connect and continuously receive PSFPL updates for flights expected to penetrate the ACC airspace
 - Suitable for Aerodromes, ACC, ANSPs and AOs
 - Services
 - FlightListByAirspaceRequest : Synchronise with NM
 - FlightRetrievalRequest : Synchronise with NM
 - CreateSubscriptionRequest :
 - SubscriptionResume FLIGHT_PLAN and consume data

Flight Data Messages use case

- Objective : Receiving PSFDs to get continuous updates on the flights expected to land at this airport
 - Suitable for Aerodromes, ACC, ANSPs and AOs
 - Synchronise from NM : Retrieve flight lists on airport of interest.
 - For each flight retrieve the flight data and populate client db.
 - Create FLIGHT_DATA subscription specifying message filter arrival airport and message payload configuration.
 - Connect and continuously receive FLIGHT_DATA updates (ICH, IAR, CPR, FSA, FUM etc) which include estimated landing time for flights to a given arrival aerodrome
 - Services Involved
 - FlightListByAerodromeRequest : Synchronise with NM
 - FlightRetrievalRequest : Synchronise with NM
 - CreateSubscriptionRequest :
 - SubscriptionResume

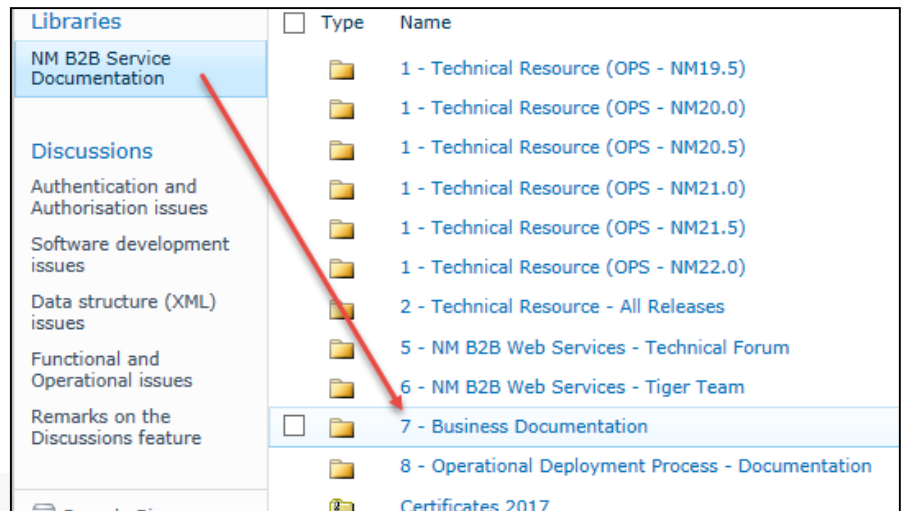
Flight Data Messages use case

- Objective: ANSP get EFD equivalent messages
- ANSP continuously receive updates on flights expected to cross their airspace.
- This is similar to the previous example.
- The PSFD message payload can be configured so that it contains the same information as in the EFD
- The following information are available in PSFD but not in EFD:
 - Last Known position
 - Aircraft Address
 - confirmed CTFM
 - icaoRoute.

Use case documents

- Flight Management – Use Cases
- Regulation Proposals via B2B – Use Cases
- Flight Plan Filing – Use Cases

* The documents are available on OneSky Teams – NM B2B Services.



Libraries	Type	Name
NM B2B Service Documentation	<input type="checkbox"/>	1 - Technical Resource (OPS - NM19.5)
	<input type="checkbox"/>	1 - Technical Resource (OPS - NM20.0)
	<input type="checkbox"/>	1 - Technical Resource (OPS - NM20.5)
	<input type="checkbox"/>	1 - Technical Resource (OPS - NM21.0)
	<input type="checkbox"/>	1 - Technical Resource (OPS - NM21.5)
	<input type="checkbox"/>	1 - Technical Resource (OPS - NM22.0)
	<input type="checkbox"/>	2 - Technical Resource - All Releases
	<input type="checkbox"/>	5 - NM B2B Web Services - Technical Forum
	<input type="checkbox"/>	6 - NM B2B Web Services - Tiger Team
	<input type="checkbox"/>	7 - Business Documentation
	<input type="checkbox"/>	8 - Operational Deployment Process - Documentation
	<input type="checkbox"/>	Certificates 2017

