



Extending CDM tools

CDM seminar workshop – 26NOV18

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Extending CDM tools

- Current activities, dsna operational portal
- Planned activities
Extending awareness/shared information
AOP/NOP





Current activities



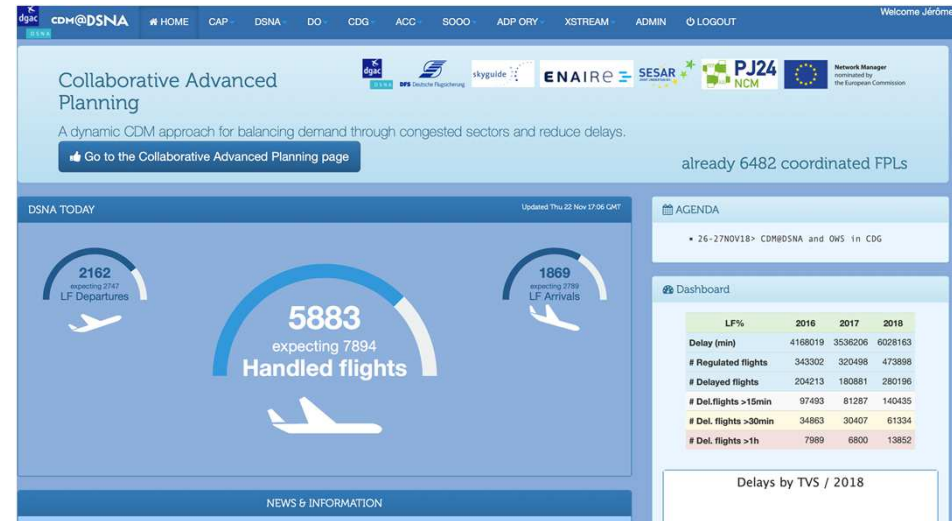
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dsna.fr today



- Since 2015, website targeted to operational exchanges
- 250+ registered users. For 2018, 10900+ opened sessions
- 25+ airline operators profiles
- ANSPs (DNSA + Enaire, DFS, skyguide, ENAV in different projects)
- Others : ADP, GTA



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Activities

- CAP - Collaborative Advanced Planning /PJ24
- ORY curfew management support
- Coordination of DSNA scenarios by DSNA FMPs
- Xstream demonstration support
- CDG dashboard
- Statistics
- Pre tactical information/ATFM info
- Other dedicated tools....





CAP Collaborative Advanced Planning

Collaborative process and tool to balance the traffic demand and reduce the need for regulations in overloaded sectors

CAP started in May 2015

Now involves 7 FMPs (DSNA, DFS, ENAIRE) and more than 20 airlines

So far, around 6500 implemented FPL changes (8170 requests, 145 abandoned) >Acceptance rate : 80%



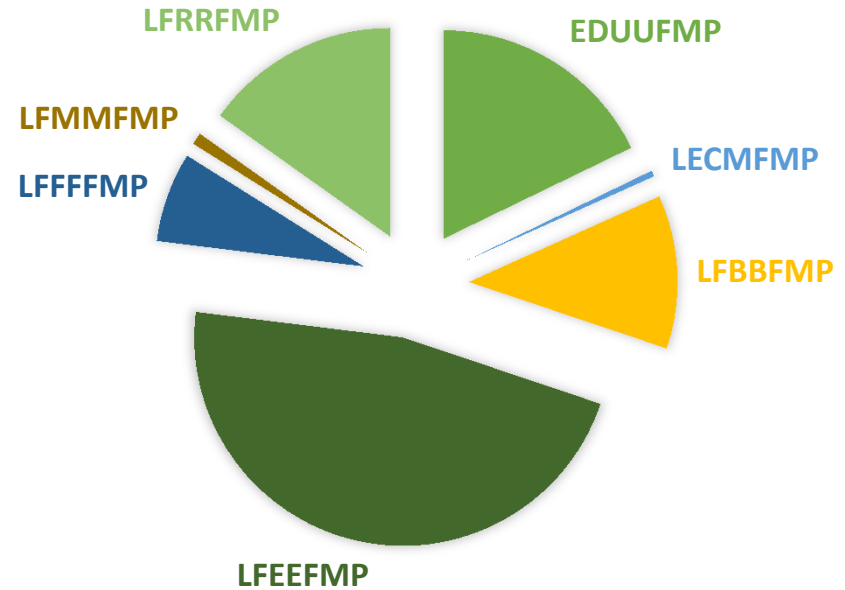
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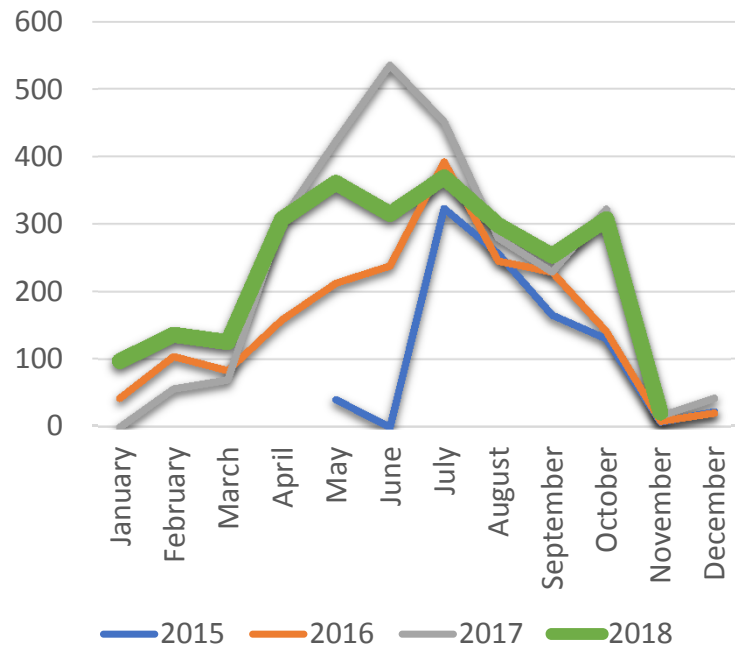
CAP

2018 - CAP USAGE BY FMP



2018 1861 updated FPLs (<25/11)

Number of CAP requests



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Extending CAP ... N-CAP (Network-CAP)

- Work in the framework of SESAR PJ24 to extend to other ANSPs and include more the NM.
- Paving the way to use NM B2B services to coordinate FPL updates using route proposals (RRP/RRN).
- Main benefits :
 - Remains not mandatory (collaborative...)
 - Better awareness of the network
 - What if & slot booking mechanisms, better view on the impact for FMPs and airlines, *you know what you'll get*
 - Future possibilities for coordinating amongst more stakeholders using the MCDM functionalities





N-CAP

FLA330	GROUND_LEVEL_CAP
FLA290	GROUND_LEVEL_CAP
FLA290	GROUND_LEVEL_CAP
FL330	GROUND_LEVEL_CAP
FLA330	GROUND_LEVEL_CAP
FL290	GROUND_LEVEL_CAP
FLA310	GROUND_LEVEL_CAP
FLA310	GROUND_LEVEL_CAP

ENTRY	OPR	ARCID	ATYP	ADEP	ADES	EGBT
2018-11-20 13:52	TAP	TAP939L	A319	LSGG	LPPR	2018-11-20 12:45
2018-11-20 14:04	AEA	AEA1036	B738	LFRG	LEMG	2018-11-20 12:00
2018-11-20 14:06	DLH	DLH66N	A321	EDDF	LEMD	2018-11-20 12:15
2018-11-20 14:06	LGL	LGL973	B738	ELIX	GMMX	2018-11-20 12:35
2018-11-20 14:11	KLM	KLM45U	B737	EHAM	LEMD	2018-11-20 12:30
2018-11-20 14:12	TAP	TAP931N	A319	LSZH	LPPR	2018-11-20 12:30
2018-11-20 14:12	CAI	CAI8822	B738	EKCH	GMMX	2018-11-20 11:45
2018-11-20 14:15	QAJ	QAJ1272	LJ45	EDDK	LEJR	2018-11-20 12:30
2018-11-20 14:32	TAP	TAP1275	A21N	LOWW	LPPR	2018-11-20 12:15

```
[type] => OUTGOING_MESSAGE
[etfmsId] => 852952
[ifplId] => AT00810877
[issuer] => LISOLTP
[message] => Sent to: LISOLTP @SITA
```

```
*LMGRTE N0394F300 TOP5I TOP P860 RONOP UP860 GIGUS/N0430F380 UP860
RUSIT/N0434F390 UY305 LERGA UN869 AGN UN995 PPN UN976 ZMR UL155 ADORO
DCT ELGIX ELGIX1T
-RRTEREF LIMCLPPRG1
-NEWRTE N0197F280 TOP5I TOP P860 RONOP/N0200F290 UP860 RUSIT UY305
LERGA UN869 AGN UN995 PPN UN976 ZMR UL155 ADORO DCT ELGIX ELGIX1T
-RESPBY 2110
-REASON OUTREG
-COMMENT PURPOSE IS STAM
-TAXITIME 0016
```

- Already under development
- Next steps:
 - Technical feasibility : winter 18/19
 - Pre-Ops trial : spring 2019
 - Ops : 2019 ?



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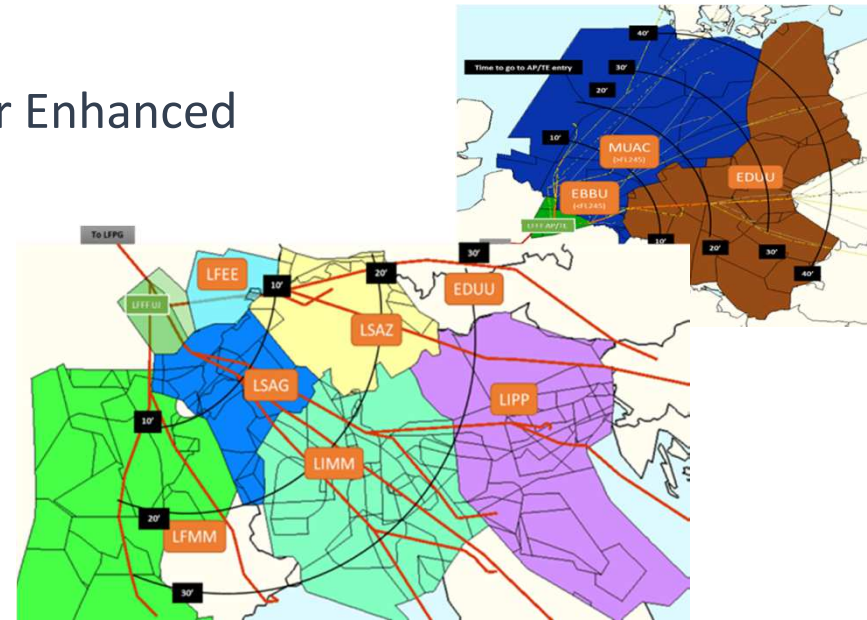


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Cross-border SESAR Trials for Enhanced Arrival Management



WP7 - Paris Implementation

EXE#3: Improved Arrival Planning and Airspace users preferences

Using dsna.fr portal to get airline priorities, AFLEX and share information regarding the computed iAMAN sequences



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ORY Curfew

FLIGHT LIST ONLY | HOME | Welcome Jérôme

LFPO ARRIVALS

LOAD from 2018-05-23 20:00 to 2018-05-23 23:59 Refresh Flight List No terminated flights

23 flights

ETA	TARGET	STA	ARCID	ATYP	REG.
2018-05-23 20:14	-	-	TVF51ZP	B738	FGZHK
2018-05-23 20:14	-	-	TVF91ZJ	B738	FHTVF
2018-05-23 20:17	-	-	CFE3HM	E170	GLCYH
2018-05-23 20:18	-	-	TVF98HF	B738	FGZHL
2018-05-23 20:19	-	-	AFR76KP	CRJ7	
2018-05-23 20:20	-	-	TVF409U	B738	FGZHD
2018-05-23 20:20	-	-	EZY5537	A320	GEZRG
2018-05-23 20:22	-	-	EZY79MJ	A320	OEIVV

Planned flight(s) for FHBIX (A320)

EOBT	ARCID	ADEP	ADES	EOBT	CTOT	ATOT	ETA	CTA	ATA	MP REG.	CAUSE
2017-09-17 02:10	AAF224-YB	DARS	LFPO	02:10	-	02:48	07:46	-	08:10	-	-
2017-09-17 09:45	AAF224-YB	LFPO	DAAG	09:45	-	10:02	11:44	-	11:42	-	-
2017-09-17 13:20	AAF224-YB	DAAG	LFPO	13:20	-	13:17	15:24	-	15:08	-	-
2017-09-17 16:15	AAF224-YB	LFPO	DAAG	16:15	-	16:41	18:07	-	18:22	-	-
2017-09-17 19:20	AAF224-YB	DAAG	LFPO	19:20	-	19:40	21:23	-	21:26	-	-
2017-09-18 06:30	AAF224-YB	LFPO	DARS	06:30	-	07:31	-	-	-	-	-
2017-09-18 06:30	AAF224-YB	DARS	LFPO	06:30	-	10:49	-	-	-	-	-

Planned: AAF224-YB, AAF224-YB, AAF224-YB, AAF224-YB, AAF224-YB
 Expected: AAF224-YB 0, LFPO, AAF224-YB 1, DAAG, AAF224-YB 2, LFPO, AAF224-YB 3, DAAG, AAF224-YB 4

Sun 17 September

Improvements for S19
 Updated presentation,
 adding CDM infos,
 Automated warnings



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CDG Dashboard



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Others...

Coordination of scenarios

FL1HYRZU

FL1HYRZU (FL_L_FFERZUNYR)
FROM: EGAM
TO: AOT
Not allowed via sector LFERZUNYR
Level constraints: File below FL 395 until clear of sector
Suggested alternative route:
On load sector: LFERZUNYR, LFERZUNYR, LFERZUNYR
Off load sector: LFERZUNYR

Thursday 24th May 2018

SCN/SUG.	TIMES	NAME	PROPOSED BY	REFUSED BY
1	06:00-07:00	FL1HYRZU	LFBRPMP	

Please, for Thursday 24 May 2018, apply the following scenarios:

Suggestions for Airlines Operators for Thursday 24 May 2018:

MAC NAME	NAME	PROPOSED BY
FL1HYRZU	FL1HYRZU	LFBRPMP
FL1RMZSI	FL1RMZSI	LFBRPMP

NEGOTIATION					
Time frame	06h-07h	07h-09h	09h-14h	14h-16h	16h-19h
Proposed by	-	-	-	-	-
Accepted by					
LFBRPMP					
LFBRPMP					

Support for Cayenne traffic prediction

OCUPANCY COUNTS

Occupancy Counts S000UTA
From 18 Sep 00:00 to 18 Sep 08:00 - Duration: 30min - generated Mon, 18 Sep 2017 09:04:47 GMT

Occupancy Counts

Legend: Demand (blue), Lead (grey)

Flight List

ENTRY TIME	ARCID	ATYP	ADEP	ADES	ROUTE	EOBT
0000-00:00:00	Test1	PS28	LFMA	LFML	MOVSA - integrated	0000-00:00:00
2017-09-18 01:17	18AP08	A333	SBBR	LPPT	N0473731 EREBUS FLNY LZS MEBNL/M81F070 LZS EGBR/N081F390 LM798 MOVGA DCT 10N033W DCT TARIIM/M081F390 DCT 30N030W DCT 18 01:17	2017-09-17 20:00
2017-09-18 02:20	18OV777	B763	LEMD	SLVR	N04747300 C051L 08RPA/N04737310 DCT ELVAR DCT HARTA DCT NELLE/M086F410 DCT 25N035W 31N030W 41N020W DCT GONAN DCT UNLMLR UN734 MOVGA LM798 EGBR UL340 PULOB/N04737310 UL340 VBR DCT	2017-09-17 20:00
2017-09-18 03:26	18AW250	B789	SCEL	EGLL	N0489F340 DONT118 DONT1 Q802 TENJL UQ802 KMJLP UT291 VAGUR/N0489F350 UM664 PAZ U7711 BOKAP UL309 RCO LZ62 MASON/N0489F370 LZ62 MNS UL306 CYR DCT 10N048W/M086F390 14N045W DCT EKOUT/M086F410 DCT 25N035W 31N030W 37N025W 41N020W DCT GONAN DCT UNLMLR UN734 UMOKA/N0489F410 UN542 RUSB/N0470F340 UN491 BETUV UY1111 JBY UN472 REVTV UPR7 DOMUT OCK48	2017-09-17 20:40



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Planned activities



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Application for INEA funding

PCP / AF4

Enablers of Network Collaborative Management at DSNA for En Route and Airports : SALTO + BigSky + CDM portal

=> DSNA Operational Portal : harmonize access to collaborative services and information sharing offered by DSNA to the benefit of AOP and NOP at a wide range of airports in France, including Paris

call INEA 2017, confirmed September 2018

Partnership : co-funding AFR/ADP + project coordination with NM



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DSNA B2B & B2C operational portal

- Harmonize and develop access to data
- B2B – SWIM compliant data sharing with stakeholders
- B2C - HMI for specific applications (CAP, Xstream, Crisis Cell, ATFM national cell, Post ops analysis, Pre tactical information, dashboards...) based on user profiles.





DSNA B2B & B2C operational portal

Sharing of information (sequences, trajectories, warnings ?)

More robust architecture / SWIM

Making use of Coflight for better trajectories

Getting Airlines « prioritised » flights

Update of ORY curfew tools

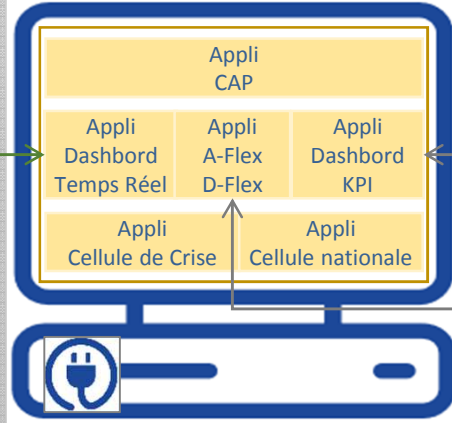
Post ops data analysis

Crisis cell tools

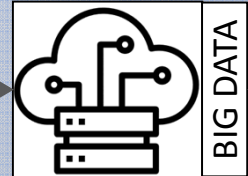
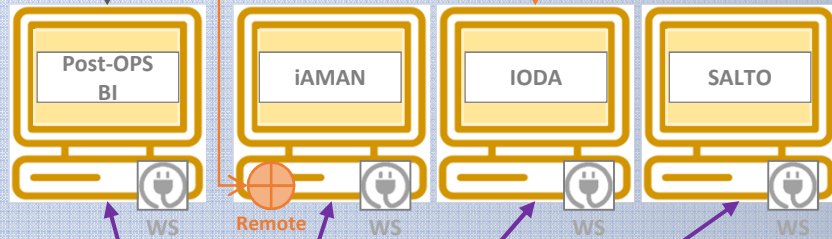
ATFM situation



CDM@DSNA portal
DSNA B2C « service library »



ATM 2



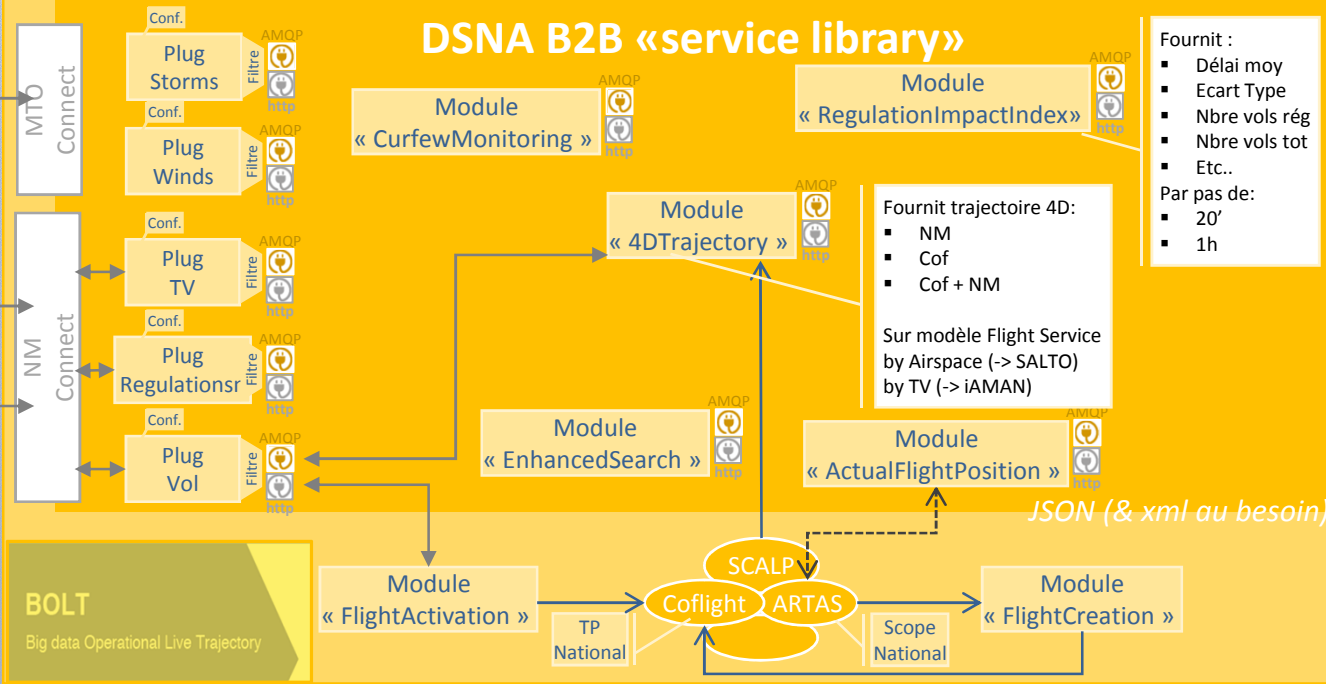
Partners



GATEWAY

ATM2-
Web

Common Server
DSNA B2B «service library»





Work in progress for new interfaces

The screenshot displays the ATFCM Measures Map interface. On the left, there are three tables: Regulations, Scenarios, and xSpots. The main area shows a map of France with a timeline at the top and a vertical axis on the left. On the right, there are two chat rooms: DSNA and FMP, and a Publication section.

Regulations		
LFMMFMPW	10:20 - 11:40	Applied
LFMMAPP	04:40 - 08:00	Terminated
LFFFAD	08:00 - 14:00	Applied
LFEFMP	07:30 - 09:00	Canceled
LFRRFMP	06:00 - 07:30	Terminated

Scenarios		
RR1BCTA	05:00 - 19:00	Proposed
RR2BCTA	05:00 - 19:00	Proposed
RR3BCTA	05:00 - 19:00	Proposed
RR4BCTA	05:00 - 19:00	Proposed
Suggest 08-A	05:00 - 19:00	Proposed

xSpots		
LFBGIR12	14:00 - 16:00	Hot
LFBX4	12:00 - 13:00	Cold
LFE4N	09:00 - 10:00	Cold
LFMEK3	06:00 - 08:00	Hot
LFMLME	05:00 - 06:00	Hot

Flows		
MILPA LERGA	14:00 - 15:00	Hot
ETNU NARAK	12:00 - 13:00	Cold
SOTAK TUPAR	08:30 - 10:00	Cold
PIGOS OKTET	07:00 - 09:00	Hot
KOLON RETNO	05:00 - 06:30	Hot



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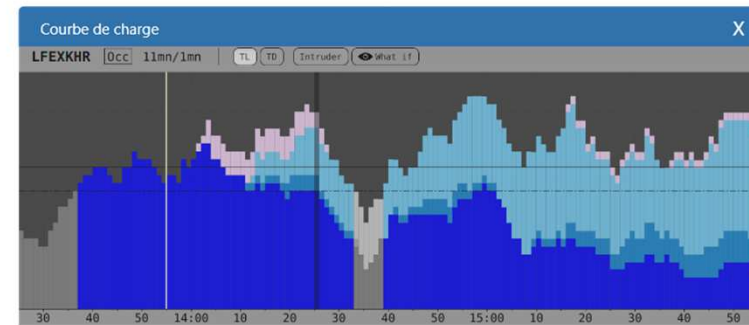
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Liste de vols

ENTRY	ARCID	ATYPE	ADEP	ADES	EFL	XFL	E0BT	E/CTOT	ATOT	Delay	Regul +	0	In...	Action
14:10	EWG1813	A321	GCFV	EDDM	340	340	10:55	11:05	10:57	---				
14:11	TUI45T	B738	GCRR	EDDL	360	315	10:40	10:50	10:53	---				
14:12	JME306A	E55P	LPPR	EPMA	450	430	12:30	12:42	12:31	---				
14:12	DLH51J	A321	LPPT	EDDF	340	332	12:15	12:27	12:25	---				
14:14	TRA15Q	B738	EHAM	LEBL	360	390	13:40	13:54	---	---				
14:16	N970KG	GLF4	LSZH	EGBB	430	430	13:30	13:40	13:38	---				
14:18	NLY4XC	B738	GCRR	EDDT	380	380	10:35	10:45	11:00	---				
14:19	HOP3004	E170	LFRS	EDDL	340	314	13:40	13:50	13:49	---				
14:21	FDX3	B77L	LFPG	EDDM	315	340	13:47	14:12	14:04	---				
14:22	JAF5LH	E190	EBAA	GMMW	315	340	14:00	14:05	---	---				
14:23	BAW9272	A320	LFMN	EGLL	380	380	13:05	13:13	13:26	---				
14:24	JAF7YC	B737	EHEH	GMPD	370	370	13:55	14:05	---	---				
14:24	TRA85V	B738	EHAM	GCLP	360	370	13:50	14:04	---	---				
14:25	RYR2RQ	B738	LFML	EBCI	340	340	13:20	13:30	13:32	---				
14:26	RYR8WE	B738	GCTS	EDLV	380	315	10:50	11:00	10:55	---				
14:29	CSA1DZ	A319	LFPG	LKPR	315	320	14:00	14:20	14:12	---				
14:29	EZY958P	A320	LFMN	LFQQ	320	315	13:25	13:33	13:32	---				
14:30	VLG6206	A319	LTRQ	EGKK	320	320	13:05	13:20	13:21	---				
14:30	RYR1CX	B738	LIME	EGSS	380	380	13:25	13:35	13:35	---				
14:31	RYR7VR	B738	EDFH	GMMX	315	350	14:05	14:09	---	---				
14:31	JAF30C	B738	EBCI	GMMN	315	330	14:10	14:15	---	---				
14:34	KLM79K	B739	EHAM	LEBL	339	370	14:00	14:14	---	---				
14:34	RYR6NC	B738	LFMP	EBCI	360	344	13:30	13:35	13:34	---				
14:35	RYR40AE	B738	GCFV	EDDB	360	363	11:05	11:15	11:10	---				



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CDM@DSNA C2C OUTILS 15:20 06 novembre LOGOUT

Regulations List TOTAL DELAY 1611' DELAYED FLIGHTS 155 AVERAGE DELAY 10'

REF	TV	TYPE	TERM	DELAY	NR FLIGHTS	AVR DELAY	TAUX	MPR	CAUSE	LOCID	DESCR	CREATION
LFPBA19N	TV	LFPPAD	TERM	-	-	-	00	MPR	19/11/2018 20:45 20/11/2018 05:00	CAUSE AERODROME_CAPACITY RMK WIP	LOCID LFPBARR DESCR LFPB ARRIVALS DELAY THRESHOLD 180 MIN	CREATION 2018-11-18 16:14
LFMLMB20	TV	LFMMAPP	APPL	17	2	9	00	MPR	20/11/2018 14:00 20/11/2018 15:00	CAUSE AIRSPACE_MANAGEMENT RMK -	LOCID LFMLMB DESCR MARSEILLE APP SECTOR MB	CREATION 2018-11-20 12:16
LFMLME20	TV	LFMMAPP	APPL	0	1	0	00	MPR	20/11/2018 14:30 20/11/2018 16:30	CAUSE AIRSPACE_MANAGEMENT RMK -	LOCID LFMLMB DESCR MARSEILLE APP SECTOR ME	CREATION 2018-11-20 12:17
LFPBA20N	TV	LFPPAD	APPL	729	1	729	00	MPR	21/11/2018 03:00 21/11/2018 04:00	CAUSE AERODROME_CAPACITY RMK WIP	LOCID LFPBARR DESCR LFPB ARRIVALS DELAY THRESHOLD 180 MIN	CREATION 2018-11-19 16:13
LFPBD20N	TV	LFPPAD	APPL	0	0	0	00	MPR	20/11/2018 21:00 21/11/2018 05:00	CAUSE AERODROME_CAPACITY RMK WIP	LOCID LFPBDEP DESCR LFPB DEPARTURES DELAY THRESHOLD 180 MIN	CREATION 2018-11-19 16:13
LFBOA20	TV	LFBBAPP	CANC	9	25	0	00	MPR	20/11/2018 11:00 20/11/2018 23:00	CAUSE AERODROME_CAPACITY RMK single rwy ops due a crane too close of one rwy	LOCID LFBOARR DESCR LFBO ARRIVALS	DELETION 2018-11-20 14:45
LFPOA20M	TV	LFPPAD	TERM	405	32	13	00	MPR	20/11/2018 06:00 20/11/2018 08:00	CAUSE WEATHER RMK SNOW	LOCID LFPOARR2 DESCR LFPO ARRIVALS	UPDATE 2018-11-20 05:02
RSNW120	TV	LFRRAPP	APPL	12	13	1	00	MPR	20/11/2018 09:00 20/11/2018 10:00	REJECTED CAUSE ATC_EQUIPMENT RMK Radar maintenance	LOCID LFRSNW1 DESCR LFRS TMA CENTRE + WEST AREAS	CREATION 2018-11-19 16:15
LFRSA20	TV	LFRRAPP	APPL	116	27	4	00	MPR	20/11/2018 09:00 20/11/2018 10:00	PROPOSAL CAUSE ATC_EQUIPMENT RMK Radar maintenance	LOCID LFRSARR DESCR LFRS ARRIVALS	UPDATE 2018-11-20 15:13
LFLN20	TV	LFMMAPP	APPL	0	16	0	00	MPR	20/11/2018 07:40 20/11/2018 19:00	CAUSE ATC_STAFFING RMK -	LOCID LFLN DESCR DEPARTURES AND ARRIVALS LFLN	CREATION 2018-11-20 07:24
LFPNG20	TV	LFPPAD	TERM	0	1	0	00	MPR	20/11/2018 08:00 20/11/2018 10:00	CAUSE SPECIAL_EVENT RMK -	LOCID LFPN DESCR LFPN ARRIVALS + DEPARTURES	CREATION 2018-11-19 16:13
LFMNA20N	TV	LFMMAPP	APPL	0	0	0	00	MPR	20/11/2018 22:30 21/11/2018 05:00	CAUSE ATC_EQUIPMENT RMK WIP in TWR	LOCID LFMNARR DESCR LFMN ARRIVALS	CREATION 2018-11-19 16:13
LFMNA19N	TV	LFMMAPP	TERM	-	-	-	00	MPR	19/11/2018 22:30 20/11/2018 05:00	CAUSE ATC_EQUIPMENT RMK WIP in TWR	LOCID LFMNARR DESCR LFMN ARRIVALS	CREATION 2018-11-18 16:14
LFPOA20	TV	LFPPAD	APPL	321	53	10	00	MPR	20/11/2018 18:00 20/11/2018 19:00	ON WORK CAUSE WEATHER RMK LOW CEILING	LOCID LFPOARR2 DESCR LFPO ARRIVALS	CREATION 2018-11-20 15:14



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what about you ?



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