En-Route ATFM Delay Dataset (FIR)

Please note that software release 20.0 of the Network Manager on 04 April 2016 introduced a change to improve the accuracy of the ATFM delay calculation for operational purposes. For more information on the change in methodology click here (http://ansperformance.eu/references/methodology/ATFM_delay_calculation.html).

Data description

The en-route ATFM delay (http://ansperformance.eu/references/definition/en-route_atfm_delay.html) provides an indication of ATFM delays on the ground due to constraints en-route.

In Europe, when traffic demand is anticipated to exceed the available capacity in en route centres or at airports, Air Traffic Control (ATC (http://ansperformance.eu/references/acronym/atc.html)) units may request the local Flow Management Position (FMP (http://ansperformance.eu/references/acronym/fmp.html)) to instigate an Air Traffic Flow Management (ATFM) measure, or regulation (http://ansperformance.eu/references/definition/regulation.html). Aircraft expected to arrive during a period of congestion are given ATFM delay at their departure airport, under the authority of the Network Manager, in order to regulate the flow of traffic into the constrained downstream en route sector or airport, thus ensuring safety.

The calculation of En-route ATFM delay is based on a well established and commonly accepted algorithm and has been in use as a commonly agreed proxy for en-route capacity shortfalls since 1999.

ATFM delay computation

The ATFM delays are calculated as the difference between the estimated take-off time calculated from the filed flight plan including updates and the calculated take-off time allocated by the central unit of ATFM.

The reason for the regulation is indicated by the responsible Flow Management Position (FMP).

The delay is attributed to the most constraining ATC unit.

Please note that the delays caused by READY to Depart (REA) messages and ATFM slot extensions were included in ATFM delays until NM release 20.0. As of 4 April 2016, delays due to REA messages and slot extensions are not included any longer which reduces the amount of computed ATFM delay.

Traffic computation

The number of flights is based on Flight Information Region (FIR) boundaries (which are not necessarily coincidental with the airspace controlled by the respective ANSP).

FAB definitions

The FAB level information is based on an aggregation of Flight Information Regions (FIRs) (ENTITY_TYPE = FAB (FIR)).

FAB Name	FIRs included	FMPs

FAB Name	FIRs included	FMPs
Baltic FAB	EPWWFIR, EYVLFIR, EYVLUIR	EPWW2012, EYVCFMP, EPWWFMP
BLUE MED FAB	LCCCFIR, LCCCUIR, LGGGFIR, LGGGUIR, LIBBFIR, LIBBUIR, LIMMFIR, LIMMUIR, LIRRFIR, LIRRUIR, LMMMFIR, LMMMUIR	LIBBFMP, LGGGFMP, LGMDFMP, LCCCFMP, LMMMFMP, LIRRFMPS, LIRRFMPN, LIRRFMPC, LIMMFMP, LIMMFMPA, LIMMFMPE, LIMMFMPT, LIMMFMPW, LIPPFMP, LIPPFMP1, LIRRFMP
DANUBE FAB	LBSRFIR, LRBBFIR	LBSRFMP1, LRBBFMP1, LRBBFMP2, LRBCFMP, LRCKFMP, LRCLFMP, LBSRFMP2, LRARFMP, LBWRFMP, LBSRFMP,LRBBFMP
DK-SE FAB	EKDKFIR, ESAAFIR	EKDKFMPE, EKDKFMPW, ESMMFMP, ESMMLOW, ESOSFMP, ESUNFMP, EKDKFMP, EKCHTMA
FABEC	EBBUFIR, EBURUIR, EDGGFIR, EDMMFIR, EDUUUIR, EDVVUIR, EDWWFIR, EHAAFIR, LFBBFIR, LFEEFIR, LFFFFIR, LFFFUIR, LFMMFIR, LFRRFIR, LSASFIR, LSASUIR	EBBUFMP, EDBBFMP, EDBBFMP1, EDFFFMP, EDGGFMP1, EDGGFMP2, EDLLFMP, EDLLFMP1, EDMERGE, EDMMFMP, EDMMFMPA, EDMMFMPE, EDMMFMPN, EDMMFMPS, EDUUFMP, EDUUFMPC, EDUUFMPE, EDUUFMPS, EDUUFMPW, EDWWFMP, EDYYFMP, EHAAFMP, LFBBAPP, LFBBFMP, LFBBFMPL, LFBBFMPU, LFBBNU, LFBBSU, LFEEAPP, LFEEFMP, LFFFAD, LFFFFMP, LFFFFMPE, LFFFFMPW, LFMMAPP, LFMMEL, LFMMEU, LFMMFMP, LFMMFMPE, LFMMFMPL, LFMMFMPU, LFMMFMPW, LFMMWL, LFMMWU, LFRRAPP, LFRRFMP, LSAZCTL, LSAGFMP, LSAGFMPL, LSAGFMPU, LSAGLFMP, LSAGUFMP, LSAZFMP, LSAZLFMP, LSAZCFL, LFRRFMP1
FAB CE	LDZOFIR, LHCCFIR, LJLAFIR, LKAAFIR, LOVVFIR, LQSBFIR, LQSBUIR, LZBBFIR	
FAB CE (SES RP1)	LHCCFIR, LJLAFIR, LKAAFIR, LOVVFIR, LZBBFIR	

FAB Name	FIRs included	FMPs
FAB CE (SES RP2)	LDZOFIR, LHCCFIR, LJLAFIR, LKAAFIR, LOVVFIR, LZBBFIR	LJLAFMP, LOVVFMP, LZBBFMP, LKAAFMPU, LKAAFMPL, LKAAFMP, LDZOFMP, LHCCFMP
NEFAB	EETTFIR, EFINFIR, EFINUIR, ENOBFIR, ENORFIR, EVRRFIR	EVRRFMP, ENTRFMP, ENSVFMP, ENOSFMP, ENBDFMP, EFPSFMP, EFINFMP, EETTFMP, EFESFMP, ENOSEFMP, ENOSWFMP
SW FAB	GCCCFIR, GCCCUIR, LECBFIR, LECBUIR, LECMFIR, LECMUIR, LPPCFIR	LECBFMP1, LECMFMPN, LECMFMPS, LECPFMP, GCCCFMP, LECBFMP, LECSFMP, LPPCFMP, LECMFMP
UK-Ireland FAB	EGPXFIR, EGPXUIR, EGTTFIR, EGTTUIR, EISNFIR, EISNUIR	EGTCFMP, EIDWFMP, EGTTOLYM, EGTTFMP1, EGTTFMP, EGTCOLYM, EISNFMP, EGPXFMP1, EGPXFMP, EGCCFMP

Column naming and types

Column name	Data source	Label	Reason Group	Column description	Example
YEAR	Network Manager	YEAR		Reference year	2015
MONTH_NUM	Network Manager	MONTH		Month (numeric)	3
MONTH_MON	Network Manager	MONTH_MON		Month (3-letter code)	MAR
FLT_DATE	Network Manager	FLT_DATE		Date of flight	17/03/201
ENTITY_NAME	PRU	ENTITY_NAME		Entity name	FAB CE
ENTITY_TYPE	PRU	ENTITY_TYPE		Type of the entity to which the data relates (ANSP, FAB, AREA)	FAB (AUA
FLT_ERT_1	Network Manager	Flights		Total number of flights within the respective airspace	3853

Column name	Data source	Label	Reason Group	Column description	Example
DLY_ERT_1	Network Manager	En-route ATFM delay		Minutes of en-route ATFM delay	0
DLY_ERT_A_1	Network Manager	A - Accident/Incident	ER Disruptions	Minutes of en-route ATFM delay with delay code A - Accident/Incident	0
DLY_ERT_C_1	Network Manager	C - ATC Capacity	ER Capacity (ATC)	Minutes of en-route ATFM delay with delay code C - ATC Capacity	0
DLY_ERT_D_1	Network Manager	D - De-icing	ER Weather	Minutes of en-route ATFM delay with delay code D - De-icing	0
DLY_ERT_E_1	Network Manager	E - Equipment (non-ATC)	ER Disruptions	Minutes of en-route ATFM delay with delay code E - Equipment (non-ATC)	0
DLY_ERT_G_1	Network Manager	G - Aerodrome Capacity	ER Capacity	Minutes of en-route ATFM delay with delay code G - Aerodrome Capacity	0
DLY_ERT_I_1	Network Manager	I - Industrial Action (ATC)	ER Disruptions (ATC)	Minutes of en-route ATFM delay with delay code I - Industrial Action (ATC)	0
DLY_ERT_M_1	Network Manager	M - Airspace Management	ER Capacity	Minutes of en-route ATFM delay with delay code M - Airspace Management	0
DLY_ERT_N_1	Network Manager	N - Industrial Action (non-ATC)	ER Disruptions	Minutes of en-route ATFM delay with delay code N - Industrial Action (non-ATC)	0
DLY_ERT_O_1	Network Manager	O - Other	ER Disruptions	Minutes of en-route ATFM delay with delay code O - Other	0
DLY_ERT_P_1	Network Manager	P - Special Event	ER Events	Minutes of en-route ATFM delay with delay code P - Special Event	0

Column name	Data source	Label	Reason Group	Column description	Example
DLY_ERT_R_1	Network Manager	R - ATC Routeing	ER Capacity	Minutes of en-route ATFM delay with delay code R - ATC Routeing	0
DLY_ERT_S_1	Network Manager	S - ATC Staffing	ER Staffing (ATC)	Minutes of en-route ATFM delay with delay code S - ATC Staffing	0
DLY_ERT_T_1	Network Manager	T - Equipment (ATC)	ER Disruptions (ATC)	Minutes of en-route ATFM delay with delay code T - Equipment (ATC)	0
DLY_ERT_V_1	Network Manager	V - Environmental Issues	ER Capacity	Minutes of en-route ATFM delay with delay code V - Environmental Issues	0
DLY_ERT_W_1	Network Manager	W - Weather	ER Weather	Minutes of en-route ATFM delay with delay code W - Weather	0
DLY_ERT_NA_1	Network Manager	NA - Not specified	ER Disruptions	Minutes of en-route ATFM delay with delay code NA - Not specified	0
FLT_ERT_1_DLY	Network Manager	FLT_ERT_1_DLY		Number of en-route ATFM delayed flights	0
FLT_ERT_1_DLY_15	Network Manager	FLT_ERT_1_DLY_15		Number of en-route ATFM delayed flights (>15 min.)	0