

# Calculations

- Volume
- TOBT Quality
- Misconnex
- Arrival Punctuality
- Departure Punctuality
- Seat Load Factor
- Booking Load Factor
- Regularity
- Boarding Time
- Boarding Time Update
- Delay
- MBI

# Volume

## Input

Name	Type	Index
flights	Array<Object>	0
options	Object	1

## Options

Option	Values	Default	Requirements
onlyAirborne	true, false	false	times.general.atd (Set: atd)

## Requirements

- passengers.onboard.wab.total
- baggage.loaded.wab.amount
- passengers.booked.storm.total
- passengers.capacity.actual.total
- route.destination
- route.origin

> Set: Volume

## Output

Field	Type
passengers	Int
flights	Int
baggages	Int
capacity	Int
booked	Int
destinations	Int
origins	Int
seat_load_factor	Double
booking_factor	Double

# TOBT Quality

## Input

Name	Type	Index
flights	Array<Object>	0
options	Object	1

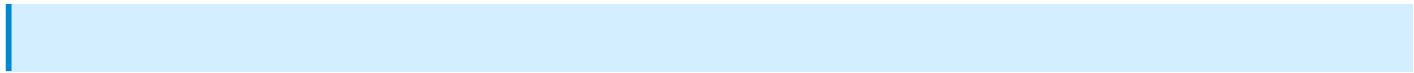
## Options

Option	Values	Default	Requirements
trend_day	true, false	false	
trend_hour	true, false	false	
flights	true, false	false	

## Requirements

- times.general.atd
- times.general.adc
- times.general.tobt
- times.startup.given

> Set: TOBT



## Output

Field	Type
stats	days
	Array<TOBT Object>
	hours
	Array<TOBT Object>
flights	total
	TOBT Object
Array<Object>	

## TOBT Object

Field	Type
ontime	Int
offtime	Int
unrated	Int
uncomplete	Int
quality	Double
rated	Double
dataquality	Double

# Misconnex

## Input

Name	Type	Index
flights	Array<Object>	0
options	Object	1

## Options

Option	Values	Default	Requirements
trend_day	true, false	false	
trend_hour	true, false	false	
flights	true, false	false	

## Requirements

- times.general.atd
- times.general.adc
- times.general.tobt
- times.startup.given

> Set: TOBT

Output

Field	Type
stats	days
	Array<TOBT Object>
	hours
	Array<TOBT Object>
	total
	TOBT Object
flights	Array<Object>

TOBT Object

Field	Type
ontime	Int
offtime	Int
unrated	Int
uncomplete	Int
quality	Double
rated	Double
dataquality	Double

# Arrival Punctuality

## Input

Name	Type	Index
flights	Array<Object>	0
options	Object	1

## Options

Option	Values	Default	Requirements
flights	true, false	false	
minutes	Int	3	

## Requirements

- times.general.ata
  - times.general.finalSta
- > Set: arrival\_punctuality

## Output

Field	Type
-------	------



stats	ontime	Int
	offtime	Int
	punctuality	Double
flights	ontime	Array<Flight>
	offtime	Array<Flight>

# Departure Punctuality

## Input

Name	Type	Index
flights	Array<Object>	0
options	Object	1

## Options

Option	Values	Default	Requirements
flights	true, false	false	
minutes	Int	15	

## Requirements

- times.general.atd
  - times.general.finalStd
- > Set: departure\_punctuality

## Output

Field	Type
-------	------

stats		
	ontime	Int
	offtime	Int
	punctuality	Double
flights		
	ontime	Array<Flight>
	offtime	Array<Flight>

# Seat Load Factor

## Input

Name	Type	Index
flights	Array<Object>	0
options	Object	1

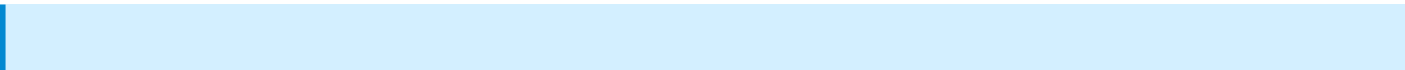
## Options

Option	Values	Default	Requirements
flights	true, false	false	

## Requirements

- passengers.onboard.wab.first
- passengers.onboard.wab.business
- passengers.onboard.wab.premium\_economy
- passengers.onboard.wab.economy
- passengers.onboard.wab.total
- passengers.capacity.actual.first
- passengers.capacity.actual.business
- passengers.capacity.actual.premium\_economy
- passengers.capacity.actual.economy

> Set: passengers



## Output

Field	Type
stats	F
	Seat Load Factor Object
	C
	Seat Load Factor Object
	E
	Seat Load Factor Object
flights	M
	Seat Load Factor Object
flights	Array<Flight>

## Seat Load Factor Object

Field	Type
passengers	Int
capacity	Int
seat_load_factor	Double

# Booking Load Factor

## Input

Name	Type	Index
flights	Array<Object>	0
options	Object	1

## Options

Option	Values	Default	Requirements
flights	true, false	false	

## Requirements

- passengers.booked.storm.first
- passengers.booked.storm.business
- passengers.booked.storm.premium\_economy
- passengers.booked.storm.economy
- passengers.booked.storm.total
- passengers.capacity.actual.first
- passengers.capacity.actual.business
- passengers.capacity.actual.premium\_economy
- passengers.capacity.actual.economy

> Set: passengers

## Output

Field	Type
stats	F
	Booking Load Factor Object
	C
	Booking Load Factor Object
	E
	Booking Load Factor Object
	M
	Booking Load Factor Object
flights	Array<Flight>

## Booking Load Factor Object

Field	Type
passengers	Int
capacity	Int
booking_load_factor	Double

# Regularity

## Input

Name	Type	Index
options	Object	0
flights_a	Array<Flight>	1
flights_b	Array<Flight>	2

## Options

Option	Values	Default	Requirements
unit	m, h, d	d	
value	Int	7	

## Requirements

- times.cancellation\_time
- times.general.finalStd
- passengers.booked.storm.total

> Set: Regularity



## Output

Field	Type
cancelled	Int
not_cancelled	Int
passengers	Int
total	Int
regularity	Double

# Boarding Time

Input

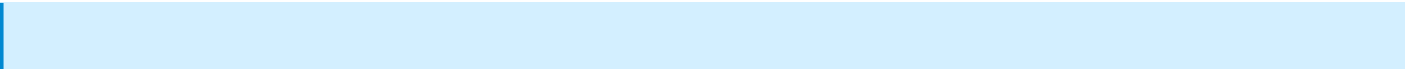
Name	Type	Index
options	Object	0
flights_a	Array<Flight>	1
flights_b	Array<Flight>	2

Options

Option	Values	Default	Requirements
--------	--------	---------	--------------

Requirements

- processes.boarding.begin.actual
  - times.general.adc
  - passengers.onboard.wab.total
- > Set: boarding\_time



Output

Field	Type
passengers	Int
time	Int
average_boarding_time	Double

# Boarding Time Update

## Input

Name	Type	Index
flights	Array<Flight>	0
options	Object	1

## Options

Option	Values	Default	Requirements
flights	true, false	true	

## Requirements

- btu.unclear
- btu.reasons

> Set: btu

Output

Field	Type	
stats	total	Int
	reasons	Object
	minus_volume	Volume
	plus_volume	Volume
	minus_d15	Departure Punctuality
	plus_d15	Departure Punctuality
flights	minus	Array<Flight>
	plus	Array<Flight>

# Delay

## Input

Name	Type	Index
flights	Array<Flight>	0
options	Object	1

## Options

Option	Values	Default	Requirements
flights	true, false	true	

## Requirements

- delays.delay\_code
- delays.sub\_delay\_code
- delays.delay
- delays.comment
- leg\_id
- times
- flags
- flight

> Set: flags, flight, times

Output

Field	Type				
stats	delays	Map of Delay Objects			
	subdelays	Map of Delay Objects			
	groups	<table><tr><td>atc</td><td>Int</td></tr><tr><td>bvd</td><td>Int</td></tr></table>	atc	Int	bvd
atc	Int				
bvd	Int				
flights	Array<Flight>				

Delay Object

Field	Type
amount	Int
sum	Int

# MBI

## Input

Name	Type	Index
flights	Array<Object>	0
options	Object	1

## Options

Option	Values	Default	Requirements
flights	true, false	false	

## Requirements

- baggage.loaded.wab.amount
- mbi

> Set: TOBT

## Output

Field	Type
-------	------



stats		
	loaded_baggages	Int
	baggages	Int
	flights	Int