GTAS

Introduction

Goals for System Overview

What is GTAS?

Why was GTAS developed?

What does 'Open Source' mean to GTAS

Objectives

How does GTAS accomplish its goal?

Who should consider GTAS?

How does the system work?

What are the setup costs?

How do I get started with GTAS?

What is GTAS?

The Global Travel Assessment System (GTAS) is an Open Source web application for improving Global Security by using industry-standard Advance Passenger Information (API, and Passenger Name Record) to screen commercial air travelers

GTAS is a free software tool for improving travel safety

Why was GTAS developed?

- GTAS was developed in response to UN SCR 2178 to help the world combat terrorism and improve travel security for everyone

- Chicago Convention Annex 9

- WCO Punta Cana Security Resolution [2014]

- UN SCR 2396 requires member states use of API/PNR systems
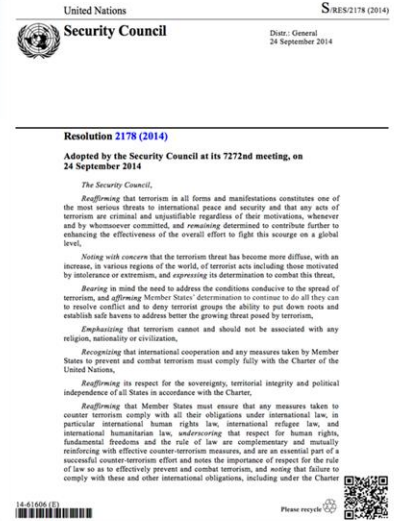
9. *Calls upon* Member States to require that airlines operating in their territories provide advance passenger information to the appropriate national authorities in order to detect the departure from their territories, or attempted entry into or transit through their territories, by means of civil aircraft, of individuals designated by the Committee established pursuant to resolutions 1267 (1999) and 1989 (2011) ("the Committee"), and further *calls upon* Member States to report any such departure from their territories, or such attempted entry into or transit through their territories, of such individuals to the Committee, as well as sharing this information with the State of residence or nationality, as appropriate and in accordance with domestic law and international obligations;

18. *Calls upon* Member States to cooperate and consistently support each other's efforts to counter violent extremism, which can be conducive to terrorism, including through capacity building, coordination of plans and efforts, and sharing lessons learned;

The mission is to help make global travel safer

What does 'Open Source' mean to GTAS?

Free | No cost to use, freedom to modify

Transparent | Human-readable source code

Always Improving | A community of developers collaborate on its improvement

Deployed Easily | Download code, build application, and start the server

Flexible | Wide Range of Tools Available

Free to Use
Freedom to modify
Forever

Objectives

- To perform risk assessment on 100 percent of Advance Passenger Information (API/PNR) received

- Facilitate low-risk travelers, and focus attention to high-risk travelers

- Allows analysts to create risk rules to screen for terrorism, contraband, duty and tax evasion, human trafficking, missing persons, overstayed visas etc.
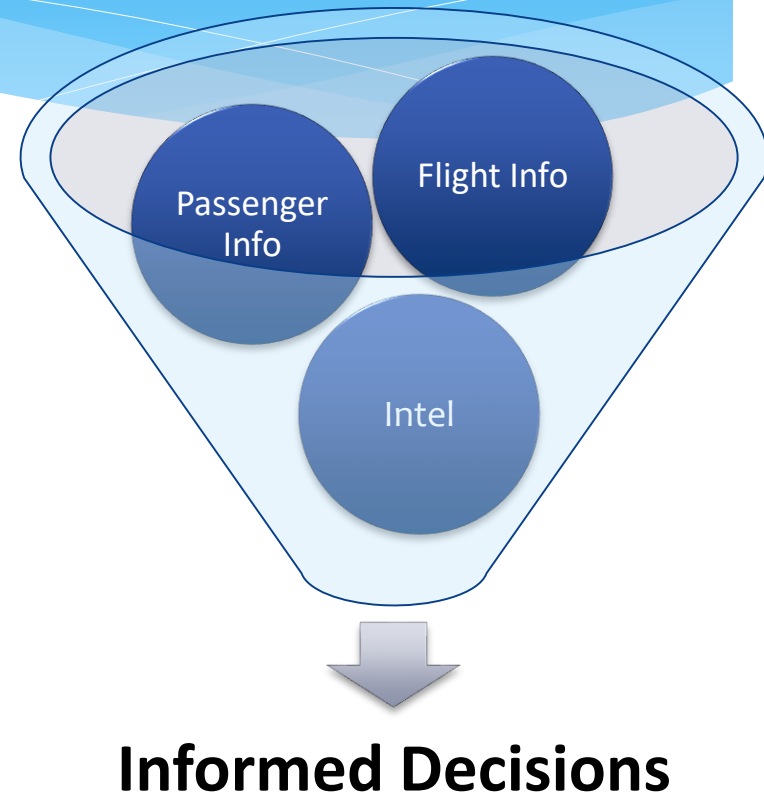
10 % of World's GDP
1/11 jobs
1.45 billion international arrivals in 2016

How does GTAS accomplish its goal?

To assist targeting officers to make better **informed decisions** by filtering:

- Flight Information
- Passenger Information
- Intelligence Information

Informed Decisions

GTAS simplifies the travel screening process

Who should consider GTAS?

GTAS is designed for use by customs administrations and their border management partners

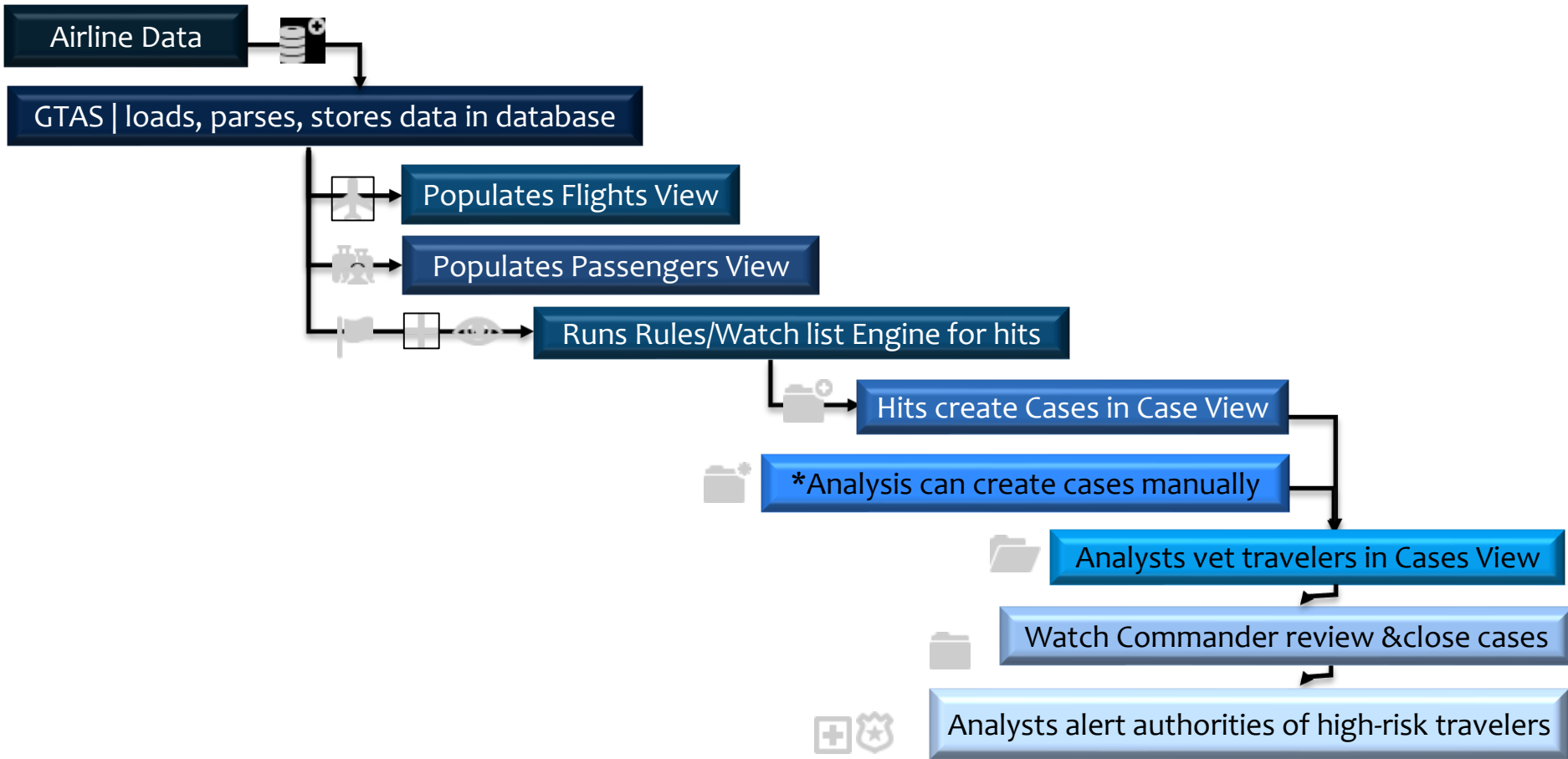Member states without an API/PNR system that needs one in the near term

Administrations looking to develop their own API/PNR System

Administrations looking to automate their risk assessment process and manage increasing passenger volumes

Create a community for:
- Developers
- Engineers
- user feedback

GTAS | How does the system work?

Airline Data

GTAS | loads, parses, stores data in database

Populates Flights View

Populates Passengers View

Runs Rules/Watch list Engine for hits

Hits create Cases in Case View

*Analysis can create cases manually

Analysts vet travelers in Cases View

Watch Commander review &close cases

Analysts alert authorities of high-risk travelers

GTAS vs. Manual Systems

Business Process

- Flight Reservation is made for Passenger
- Passenger Checks In, Checks Luggage
- Security Agency at Departure Airport Reviews Travel Documents
- Flight Manifest Generated before departure
- Passenger Boards Plane
- Takeoff
- Landing
- Passenger Arrives at Border Checkpoint

Manual Systems

Manual Screening Process, with little time to act before Passenger arrives

PNR 1

PNR 2

APIS PAXLIST
(Manifest of all Passengers)

GTAS

Advance Screening Begins with Rules engine process

Screening System is automated , with more time to act
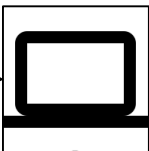
What are standard API/PNR message formats?

- The WCO/ICAO/IATA Guidelines prescribe API/PNR message formats as:

  - o   UN/EDIFACT PAXLIST
  - o   PNRGOV

- APIS and PNR messages come from Airline Reservation systems and document scans

- Agencies hire Commercial Third Parties for aggregating and supplying the data

What does the raw data UN/EDIFACT data look like?


```
16898_leg1of1_BA217_LHR_IAD_20171013 0940_APIS.txt
UNA:+.? '
UNB+UNOA:4+LUFTHANSA:ZZ+HDQCH2X:ZZ+131017:0955+256990919++APIS'
UNH+44304849343350+PAXLST:D:02B:UN:IATA'
BGM+745'
NAD+MS+++UNITED HELPDESK SIN'
COM+044 222 222222:TE'
TDT+20+BA217'
LOC+125+LHR'
DTM+189:1710130940:201'
LOC+87+IAD'
DTM+232:1710131245:201'
NAD+FL+++OFLYNN:RILEY:ALFIE'ATT+2++M'DTM+329:941111'FTX+BAG++
+BA2170001'LOC+178+LHR'LOC+179+IAD'LOC+174+GBR'NAT+2+GBR'RFF+AVF:
5158E3'RFF+SEA:
23A'DOC+P+926487015'DTM+36:231020'LOC+91+GBR'DOC+V+05164323'DTM+3
6:180909'LOC+91+USA'
NAD+FL+++ROPER:RUBYE:ELLAN'ATT+2++F'DTM+329:410823'FTX+BAG++
+BA2170002:3'LOC+178+LHR'LOC+179+IAD'LOC+174+USA'NAT+2+USA'RFF+AV
F:5158E3'RFF+SEA:
36A'DOC+P+389182886'DTM+36:200206'LOC+91+USA'DOC+
+'DTM+36:180225'LOC+91+'
NAD+FL+++LEGGE:HANNAH:YASMIN'ATT+2++F'DTM+329:871101'FTX+BAG++
+BA2170005'LOC+178+LHR'LOC+179+IAD'LOC+174+GBR'NAT+2+GBR'RFF+AVF:
7925CF'RFF+SEA:
26B'DOC+P+801493023'DTM+36:170119'LOC+91+GBR'DOC+V+56311146'DTM+3
6:170923'LOC+91+USA'
NAD+FL+++BUI:STEPHANIE:MELAINE'ATT+2++F'DTM+329:400807'FTX+BAG++
+BA2170006'LOC+178+LHR'LOC+179+IAD'LOC+174+USA'NAT+2+USA'RFF+AVF:
D1EB57'RFF+SEA:45D'DOC+P+342080089'DTM+36:191125'LOC+91+USA'DOC+
+'DTM+36:190219'LOC+91+'
NAD+FL+++HARTLE:COREY:DWIGHT'ATT+2++M'DTM+329:600718'FTX+BAG++
+BA2170007:3'LOC+178+LHR'LOC+179+IAD'LOC+174+USA'NAT+2+USA'RFF+AV
F:D1EB57'RFF+SEA:
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6:180512'LOC+91+USA'
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+'DTM+36:190211'LOC+91+'
NAD+FL+++JOHNSTONE:REECE:ANDREW'ATT+2+
+M'DTM+329:600711'LOC+178+LHR'LOC+179+IAD'LOC+174+GBR'NAT+2+GBR'R
```

```
2965_PNR_001.txt — Edited
UNB+IATA:1+VX++171010:2001+020A07'
UNH+1+PNRGOV:10:1:IA+F6C2C268'
MSG+:22'
ORG+VX:LAX+48513'
TVL+121017:0900+IAD+LAX+VX+89'
EQN+123'
SRC'
RCI+VX:5AE877:280917:0815'
DAT+700:091017:0900+710:280917:0815'
ORG+DL:IAD+70379193:LON+++A+GB:GBP+D050517'
ADD++702:2631 JAFFRAY AVENUE:SEOUL:::KR::883000544540'
TIF+ARMSTRONG+MASONMR:A:1'
FTI+VX:94731:::ELITE'
IFT+4:28::YY+CTCE MASON..ARMSTRONG//GMAIL.COM'
REF+:216151692'
FAR+N++++MIL24'
SSR+DOCS:HK::DL::::::/P/GBR/445883838//09JUN90/M/26MAY26/ARMSTRONG/MASONMR/ANTHONY'
TKT+48497048497048:T:1'
MON+B:2888.00:GBP+T:2957.94:GBP'
PTK+NR++150417:1010+DL+006+LON'
TXD++3.10:::AY6+8.50:::YQ+3.40:::YC+4.30:::XY+3.10:::XA+2.80:::XF'
DAT+710:130417:0000'
IFT+4:43+MASON ARMSTRONG+STREET ADDRESS CITY STATE ZIP CODE+PHONE NUMBER'
TVL+121017:0900:131017:1126+IAD+LAX+MU:VX+3900:B'
TVL+++++89:M'
APD+777'
SSR+SEAT:HK:1:VX:::IAD:LAX+23B::1'
RCI+VX:5AE877'
DAT+2:121017:0700'
TRI++1:::1'
TIF+ARMSTRONG+MASONMR:A:1'
SSD+23B++++Y'
TBD++01:59:701+++VX:0001::LAX:006'
ABI+1+:LHRRR+LON++DL'
DAT+ZT:071210:1010'
UNT+5769'
UNZ+1+020A07'
```

The raw data is received in English per UN/EDIFACT standard, but the UI has several language translation files for ease of use. Proficiency in English language is a requirement for any system using this standard.
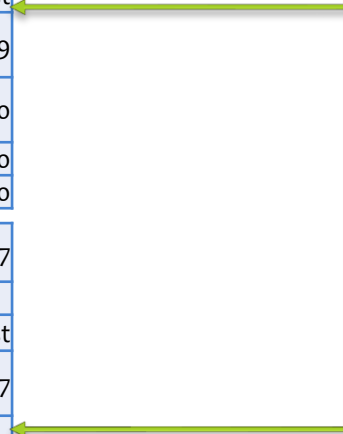
What are the setup costs?

GTAS | bill of materials

Software Total				$0
Product	Description	Quantity	Unit Cost	Cost
Java 8	JRE	1	$0.00	$0
Apache Tomcat 8	Web/Application Server	1	$0.00	$0
MariaDB 10.0 Stable	Database	1	$0.00	$0
CentOS 7	Operating System	1	$0.00	$0
Web Browser		1	$0.00	$0
GTAS	Java Web Application	1	$0.00	$0

Minimal Hardware Configuration				$11,619
Product	Description	Quantity	Unit Cost	Cost
PowerEdge R830 Rack Server	2U Server	1	$6,069.00	$6,069
Intel Xeon processor E5-4600	x64-Based Processor	2	$2,400.00	$4,800
32G DDR4	RAM	2	$250.00	$500
5T SATA 7200RPM	Disk	1	$250.00	$250

Optimal Hardware Configuration				$37,107
Product	Description	Quantity	Unit Cost	Cost
PowerEdge R830 Rack Server	2U Server	3	$6,069.00	$18,207
Intel Xeon processor E5-4600	x64-Based Processor	6	$2,400.00	$14,400
32G DDR4	RAM	6	$250.00	$1,500
5T SATA 7200RPM	Disk	2	$250.00	$500
20TB (4 x 5TB) NAS	Network Storage	1	$2,500.00	$2,500
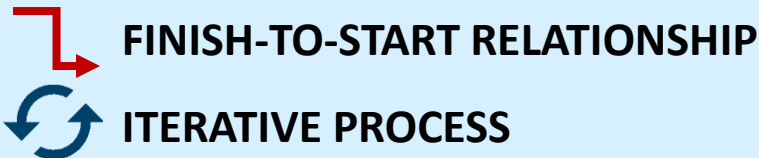
Contact Us

For General Inquiries:

GTAS@wcoomd.org

For Developers:

A simple, effective passenger screening and analysis solution available right now on

GitHub

https://us-cbp.github.io/GTAS/