

## Relationship between Arrival delay time and Departure delay time

### Airline - American Airlines | Year 2021

This is a simple visual describing relationship between arrival delays and departure delays.

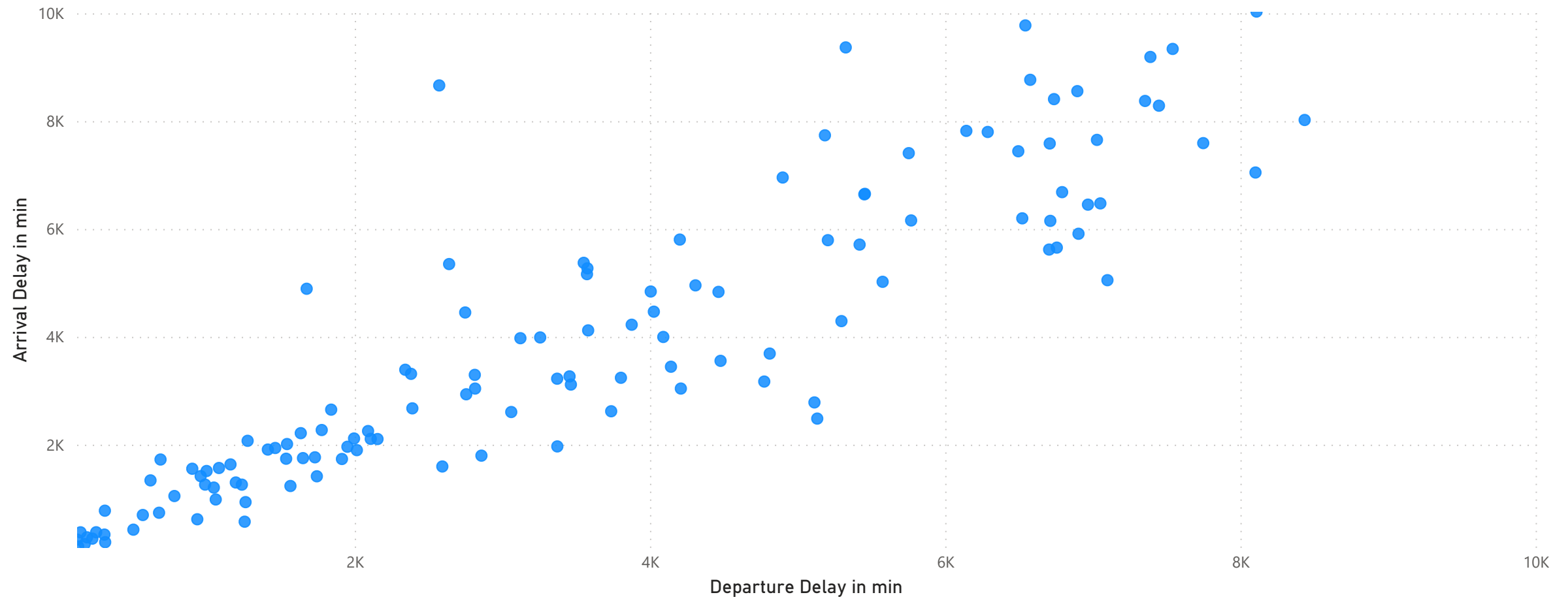
It is pretty evident that their relationship is linear and positive.

Greater the departure delays, greater are the arrival times. However there are few outliers where these variables seem independent. There could be various factors influencing these variables.

# American Airlines

## 2021

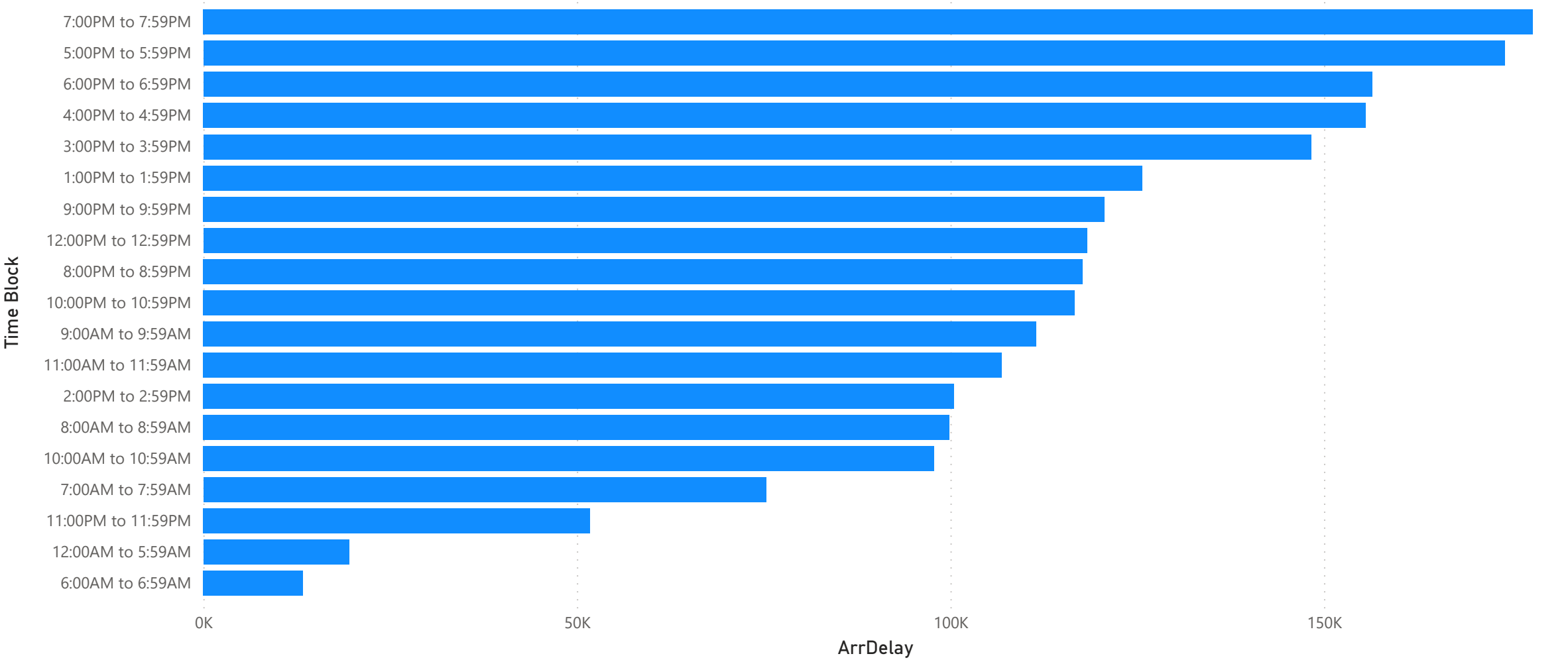
Departure Delay in min and Arrival Delay in min by Destination Airport



Arrival Delays by Time block of the day for all flights in the year 2021

This visual shows a chart of delays occurring at different time blocks in a day.  
The delay time considered here are greater than 30 min and for all carriers at all destination airports.  
It can be observed that the delay times are lesser during the early hours of the day - between 6am to 6.59 am. The delay times increase as the day progresses.  
The highest delay times occur during the peak evening hours - 4 pm tp 7.59 pm

ArrDelay by Time Block



Flight Cancellations by Reason  
All carriers included

This visual gives an overall understanding of reasons for flight cancellations by carrier categorized into 4 reasons - Weather, National Air System(Federal Aviation Administration that controls the traffic service), Carrier and Security.

The pie chart shows the percentage of each of these categories by count of total cancellations per Origin of Airport.

Through all the years, one can derive that weather has been the major reason for cancellations, followed by Carrier operations.

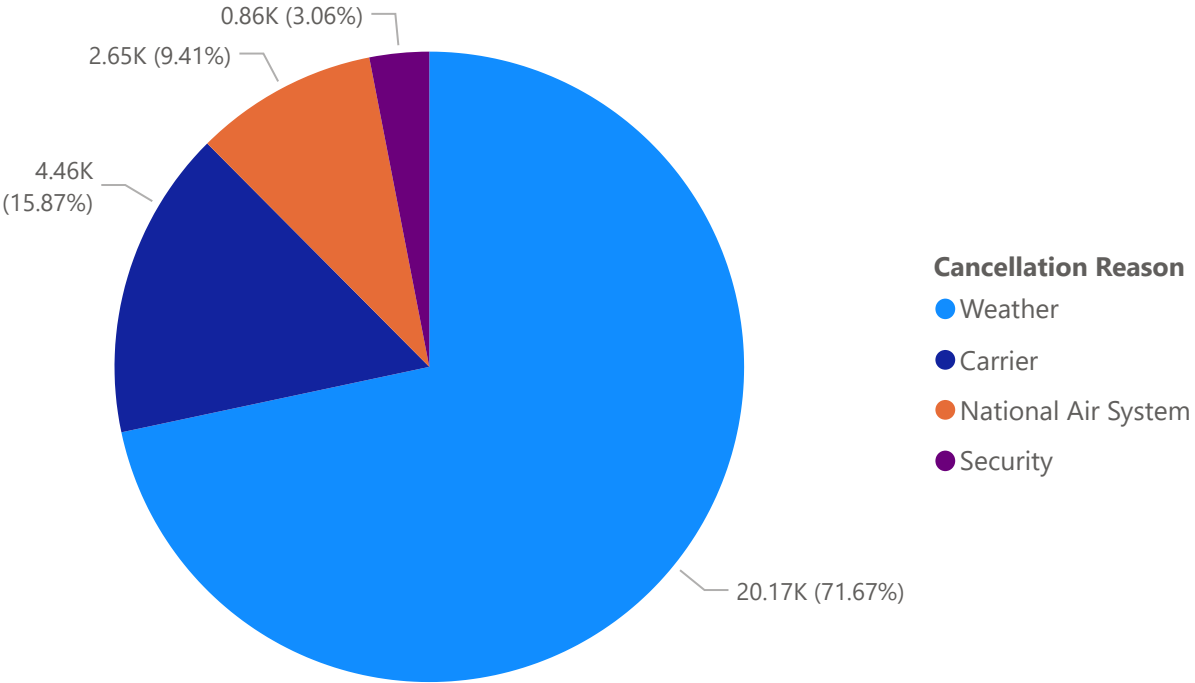
The table on the right shows the total count of cancellations per origin airport and the respective reasons.

- Year
- 2015
  - 2016
  - 2020
  - 2021

Flight Cancellations by Reason

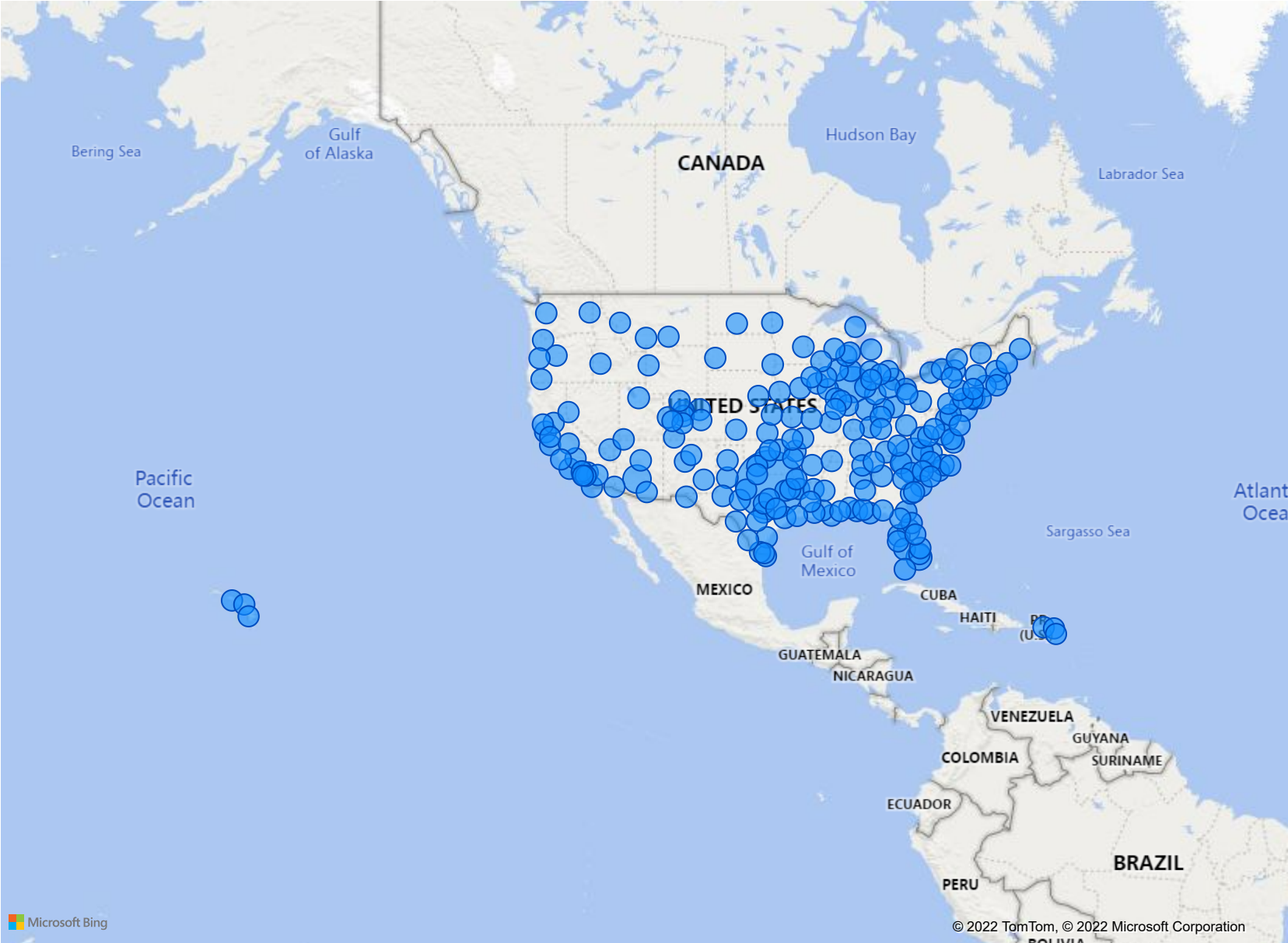
Count of Total cancellations per Airport	Origin Airport	Cancellation Reason
3	Aberdeen, SD	Weather
1	Abilene, TX	Carrier
2	Abilene, TX	National Air System
24	Abilene, TX	Weather
5	Adak Island, AK	Weather
1	Aguadilla, PR	Carrier
2	Aguadilla, PR	National Air System
7	Aguadilla, PR	Weather
3	Akron, OH	Carrier
16	Akron, OH	National Air System
2	Akron, OH	Security
9	Akron, OH	Weather
3	Alamosa, CO	Weather
5	Albany, NY	Carrier
10	Albany, NY	National Air System
28136		

- Origin Airport
- Aberdeen, SD
  - Abilene, TX
  - Adak Island, AK
  - Aguadilla, PR
  - Akron, OH
  - Alamosa, CO
  - Albany, NY
  - Albuquerque, NM
  - Alexandria, LA
  - Allentown/Bethlehem/Eas...
  - Alpena, MI
  - Amarillo, TX
  - Anchorage, AK
  - Appleton, WI
  - Arcata/Eureka, CA
  - Asheville, NC
  - Ashland, WV
  - Aspen, CO
  - Atlanta, GA
  - Atlantic City, NJ



Number of flights with Arrival delay > 60 minutes  
Carrier: American Airlines  
All years

Count of Operating Carrier Flight # by Destination



This visual shows all the American Airlines Flights that had a Arrival delay greater than 60 min.  
The size of the bubble is indicative of the number of flights that had a delay. Bigger the size of the bubble, greater is the number of delayed flights at the arrival location indicated.  
This data includes from all of the year - 1998, 1999, 2015, 2016, 2020 and 2021.  
This data is useful for American Airlines management in determining which location suffered higher arrival delays over the years.

year(ar...  
☐ 1998  
☐ 1999  
☐ 2015  
☐ 2016  
☐ 2020  
☒ 2021

Destination  
☐ Abilene, TX  
☐ Akron, OH  
☐ Albany, NY  
☐ Albuquerque, NM  
☐ Alexandria, LA  
☐ Allentown/Bethlehem/Easton, PA  
☐ Amarillo, TX  
☐ Appleton, WI  
☐ Aspen, CO  
☐ Atlanta, GA  
☐ Augusta, GA  
☐ Austin, TX  
☐ Bakersfield, CA  
☐ Baltimore, MD