



POWER QUERY: INTRODUCTION

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International Association Crime Analysts

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INSTRUCTOR & COURSE INTRODUCTION

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Power Query

- ✓ Power Query documentation
<https://docs.microsoft.com/en-us/power-query>
- ✓ Power Query M Language documentation
<https://learn.microsoft.com/en-us/powerquery-m/power-query-m-language-specification>



POWER BI GROUP FOR LAW ENFORCEMENT

<https://www.linkedin.com/groups/9262068/>



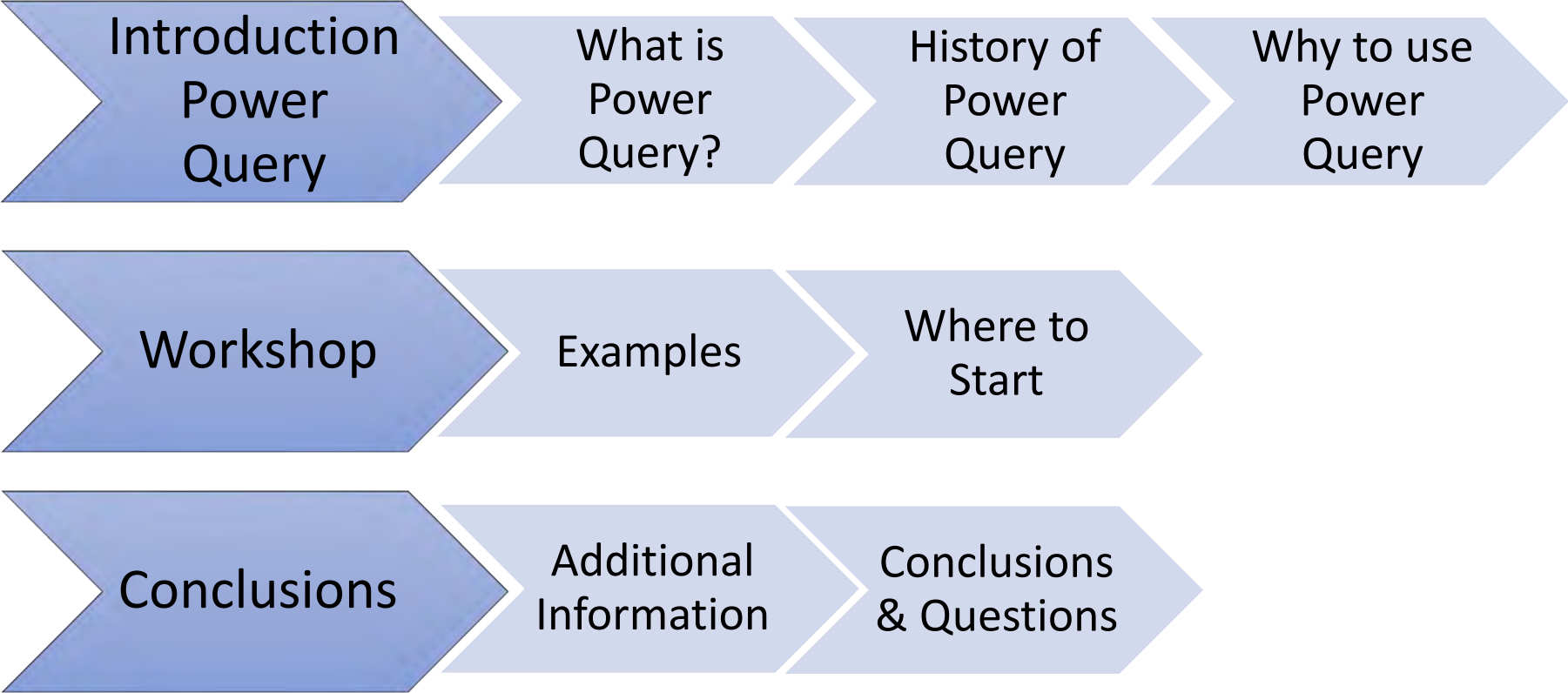
Power BI & Law Enforcement

 Listed group

6 members

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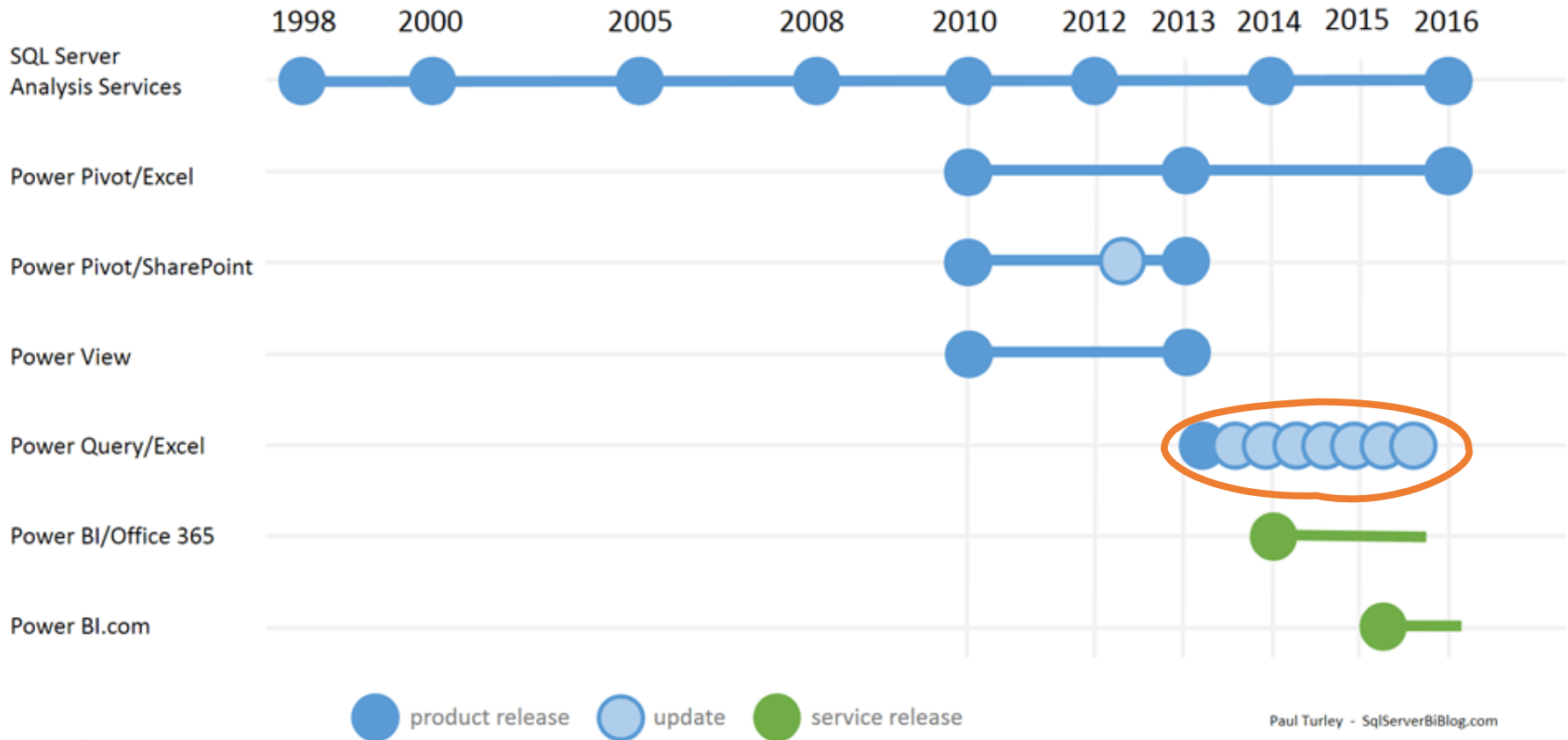


POWER QUERY - WHAT IS POWER QUERY?

- ✓ Power Query is the most powerful data automation tool found in Excel 2010 and later
- ✓ Power Query is an application for transforming and preparing data:
 - ✓ Import data from any number of sources
 - ✓ Clean data
 - ✓ Transform data,
 - ✓ Reshape data according to your needs
- ✓ The query can be set only once and re-used later by refreshing the data
- ✓ Power Query has several useful features such as:
 - ✓ the appending of data and creating relationships between different data sets such as:
 - ✓ merging of the data sets
 - ✓ grouping and summarizing data

POWER QUERY - HISTORY

Power BI Technologies & Tools History



Paul Turley - SqlServerBiBlog.com

POWER QUERY - WHY TO USE POWER QUERY

- ✓ Selection of tools for transforming data and bringing them together to analyze
- ✓ Reducing manual work and saving time
- ✓ Refreshing and updating data quickly
- ✓ Speed and efficiency
- ✓ Does not affect the original file
- ✓ Power Query is reusable
- ✓ Power Query is modified by using the Edit option
- ✓ Power Query can connect to many data sources and retain a connection to them
- ✓ By refreshing the data, all transformation steps can be applied immediately

POWER QUERY - EXAMPLES

File Home Insert Page Layout Formulas Data Review View Developer Help Acrobat

Clipboard Font Alignment Number Styles Cells Editing Sensitivity

Calibri 11 A A Wrap Text Merge & Center General \$ % , .00 .00 Conditional Formatting Format as Table Cell Styles Insert Delete Format Sum Filter Sort & Find & Select

E6 Wednesday

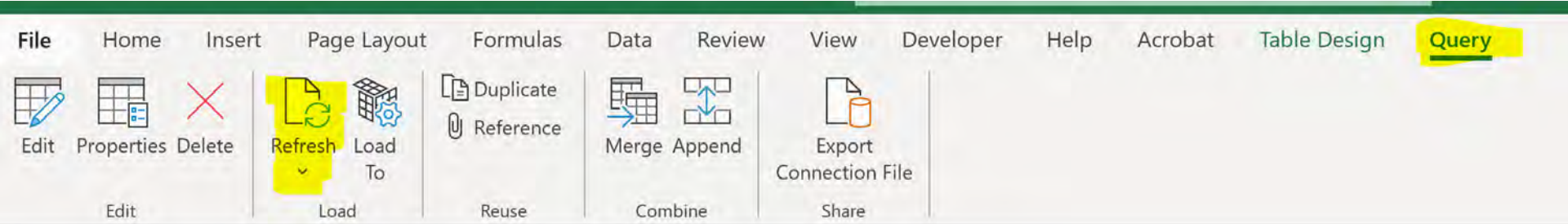
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	Incident Datetime	Incident Date	Incident Ti	Incident Y	Incident D	Report Datetime	Row ID	Incident IC	Incident N	CAD Num	Report Tyr	Report Tyr	Filed Onlir	Incident C	Incident C	Incident S	Incident D
2	3/5/2019 21:00	3/5/2019	21:00	2019	Tuesday	3/7/2019 12:54	7.78E+10	778087	1.96E+08		II	Coplogic Ir	TRUE	6372	Larceny Th	Larceny Th	Theft, Oth
3	12/22/2018 12:00	12/22/2018	12:00	2018	Saturday	12/26/2018 14:29	7.52E+10	752469	1.81E+08	1.84E+08	VI	Vehicle Initial		7023	Motor Veh	Motor Veh	Vehicle, St
4	8/24/2018 17:30	8/24/2018	17:30	2018	Friday	8/24/2018 19:35	7.07E+10	706753	1.81E+08	1.82E+08	II	Initial		6243	Larceny Th	Larceny - f	Theft, For
5	10/20/2018 15:10	10/20/2018	15:10	2018	Saturday	10/20/2018 15:10	7.28E+10	728264	1.81E+08	1.83E+08	IS	Initial Supplement		62071	Warrant	Other	Probation C
6	6/5/2019 0:36	6/5/2019	0:36	2019	Wednesday	6/5/2019 0:37	8.08E+10	808230	1.9E+08	1.92E+08	II	Initial		30140	Other Offe	Other	Air Gun, P
7	2/12/2019 7:00	2/12/2019	7:00	2019	Tuesday	2/12/2019 9:20	7.7E+10	769624	1.9E+08	1.9E+08	II	Initial		6304	Larceny Th	Larceny Th	Theft, For
8	12/7/2018 12:30	12/7/2018	12:30	2018	Friday	12/7/2018 12:35	7.46E+10	745735	1.81E+08	1.83E+08	II	Initial		26200	Other Mis	Other	State Code
9	10/4/2018 9:00	10/4/2018	9:00	2018	Thursday	10/4/2018 9:00	7.26E+10	725578	1.81E+08		IS	Initial Supplement		5053	Burglary	Burglary -	Burglary, S
0	5/17/2019 17:00	5/17/2019	17:00	2019	Friday	5/18/2019 13:49	8.02E+10	802216	1.9E+08	1.91E+08	II	Initial		15161	Offences A	Other	Violation c
1	1/31/2019 13:24	1/31/2019	13:24	2019	Thursday	1/31/2019 13:24	7.65E+10	765301	1.9E+08	1.9E+08	IS	Initial Supplement		3034	Robbery	Robbery -	Robbery, S
2	2/15/2019 23:30	2/15/2019	23:30	2019	Friday	2/16/2019 1:07	7.71E+10	771464	1.96E+08		II	Coplogic Ir	TRUE	71000	Lost Prope	Lost Prope	Lost Prope
3	5/24/2019 16:16	5/24/2019	16:16	2019	Friday	6/11/2019 15:54	8.1E+10	810498	1.9E+08	1.92E+08	II	Initial		9029	Fraud	Fraud	False Pers
4	11/10/2018 1:57	11/10/2018	1:57	2018	Saturday	11/10/2018 2:19	7.36E+10	735838	1.81E+08	1.83E+08	II	Initial		28160	Malicious	Vandalism	Malicious
5	5/24/2019 18:45	5/24/2019	18:45	2019	Friday	5/24/2019 18:49	8.05E+10	804508	1.9E+08	1.91E+08	II	Initial		4134	Assault	Simple Ass	Battery

POWER QUERY - EXAMPLES

The screenshot shows the Microsoft Excel interface with the following data table:

	A	B	C	D
1	Incident Category	Incident Subcategory	Police District	Count
2	Motor Vehicle Theft	Motor Vehicle Theft	Richmond	567
3	Motor Vehicle Theft	Motor Vehicle Theft	Mission	910
4	Offences Against The Family And Children	Other	Southern	186
5	Burglary	Burglary - Other	Park	255
6	Burglary	Burglary - Other	Northern	745
7	Offences Against The Family And Children	Other	Tenderloin	119
8	Robbery	Robbery - Other	Bayview	154
9	Motor Vehicle Theft	Motor Vehicle Theft	Ingleside	1087
10	Robbery	Robbery - Other	Mission	199
11	Robbery	Robbery - Carjacking	Bayview	58
12	Assault	Simple Assault	Bayview	415
13	Motor Vehicle Theft	Motor Vehicle Theft	Northern	892
14	Offences Against The Family And Children	Other	Mission	196
15	Burglary	Burglary - Commercial	Taraval	70
16	Motor Vehicle Theft	Motor Vehicle Theft	Central	496
17	Assault	Aggravated Assault	Bayview	564
18	Assault	Simple Assault	Central	499
19	Robbery	Robbery - Street	Richmond	16
20	Burglary	Burglary - Residential	Park	341

POWER QUERY - EXAMPLES



B8 Robbery - Other

	A	B	C	D	E
1	Incident Category	Incident Subcategory	Police District	Count	
2	Motor Vehicle Theft	Motor Vehicle Theft	Richmond	567	
3	Motor Vehicle Theft	Motor Vehicle Theft	Mission	910	
4	Offences Against The Family And Children	Other	Southern	186	
5	Burglary	Burglary - Other	Park	255	
6	Burglary	Burglary - Other	Northern	745	
7	Offences Against The Family And Children	Other	Tenderloin	119	
8	Robbery	Robbery - Other	Bayview	154	
9	Motor Vehicle Theft	Motor Vehicle Theft	Ingleside	1087	
10	Robbery	Robbery - Other	Mission	199	
11	Robbery	Robbery - Carjacking	Bayview	58	

POWER QUERY – WHERE TO START

File Home Insert Page Layout Formulas **Data** Review View Developer Help Acrobat

Get Data (highlighted) From Text/CSV (highlighted) From Web (highlighted) From Table/Range

Recent Sources Existing Connections Refresh All Queries & Connections Properties Edit Links Sort Filter Clear Reapply Advanced Text to Columns

- From File
- From Database
- From Azure
- From Online Services
- From Other Sources
- Combine Queries
- Launch Power Query Editor...
- Data Source Settings...
- Query Options

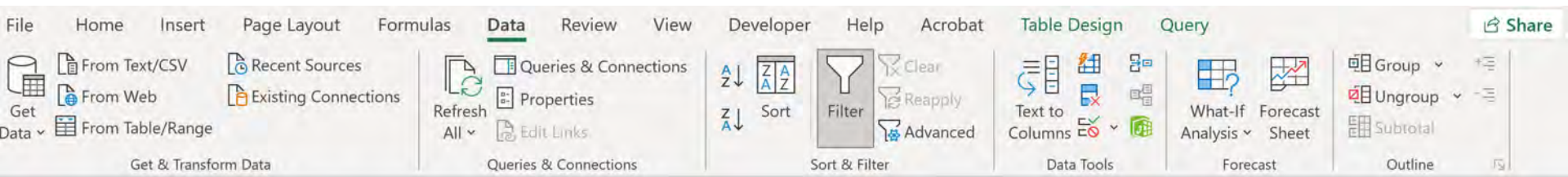
fx	B	C	D	E
Day of Week	Incident ID	Incident Category	Incident Subcategory	
Sunday	778087	Larceny Theft	Larceny Theft - Other	
Monday	752469	Motor Vehicle Theft	Motor Vehicle Theft	
Tuesday	706753	Larceny Theft	Larceny - From Vehicle	
Wednesday	728264	Warrant	Other	
Thursday	808230	Other Offenses	Other	
Friday	769624	Larceny Theft	Larceny Theft - From Building	
Saturday	745735	Other Miscellaneous	Other	
Sunday	725578	Burglary	Burglary - Commercial	
Monday	802216	Offences Against The Family And	Other	
Tuesday	765301	Robbery	Robbery - Commercial	
Wednesday	771464	Lost Property	Lost Property	
Thursday	810498	Fraud	Fraud	
Friday	735838	Malicious Mischief	Vandalism	
Saturday	804508	Assault	Simple Assault	

POWER QUERY – WHERE TO START

The screenshot shows the Microsoft Excel interface with the 'Data' tab selected. A 'Create Table' dialog box is open, asking 'Where is the data for your table?' with the range '\$A\$1:\$J\$80615' entered. The 'My table has headers' checkbox is checked. The background shows a table with the following data:

Incident Date and Time	Incident Day of Week	Incident Subcategory	Incident Description
3/5/2019 21:00	Tuesday	Larceny Theft - Other	Theft, Other Prop
12/22/2018 12:00	Saturday	Motor Vehicle Theft	Vehicle, Stolen, M
8/24/2018 17:30	Friday	Larceny - From Vehicle	Theft, From Lock
10/20/2018 15:10	Saturday	Other	Probation Search
6/5/2019 0:36	Wednesday	Other	Air Gun, Possessio
2/12/2019 7:00	Tuesday	Larceny Theft - From Building	Theft, From Build
12/7/2018 12:30	Friday	Other	State Code Felony
10/4/2018 9:00	Thursday	Burglary - Commercial	Burglary, Store, U
5/17/2019 17:00	Friday	Other	Violation of Restr
1/31/2019 13:24	Thursday	Robbery - Commercial	Robbery, Service

POWER QUERY – WHERE TO START



	A	B	C	D	E	F	G
1	Incident Date and Time	Incident Day of Week	Incident ID	Incident Category	Incident Subcategory	Incident Description	Police Dis
2	3/5/2019 21:00	Tuesday	778087	Larceny Theft	Larceny Theft - Other	Theft, Other Property, \$50-\$200	Tenderloin
3	12/22/2018 12:00	Saturday	752469	Motor Vehicle Theft	Motor Vehicle Theft	Vehicle, Stolen, Motorcycle	Northern
4	8/24/2018 17:30	Friday	706753	Larceny Theft	Larceny - From Vehicle	Theft, From Locked Vehicle, \$200-\$950	Ingliside
5	10/20/2018 15:10	Saturday	728264	Warrant	Other	Probation Search	Southern
6	6/5/2019 0:36	Wednesday	808230	Other Offenses	Other	Air Gun, Possession	Central
7	2/12/2019 7:00	Tuesday	769624	Larceny Theft	Larceny Theft - From Building	Theft, From Building, >\$950	Southern
8	12/7/2018 12:30	Friday	745735	Other Miscellaneous	Other	State Code Felony (general)	Bayview
9	10/4/2018 9:00	Thursday	725578	Burglary	Burglary - Commercial	Burglary, Store, Unlawful Entry	Central
10	5/17/2019 17:00	Friday	802216	Offences Against The Family And	Other	Violation of Restraining Order	Bayview
11	1/31/2019 13:24	Thursday	765301	Robbery	Robbery - Commercial	Robbery, Service Station, W/ Force	Northern
12	2/15/2019 23:30	Friday	771464	Lost Property	Lost Property	Lost Property	Northern
13	5/24/2019 16:16	Friday	810498	Fraud	Fraud	False Personation to Receive Money or	Mission
14	11/10/2018 1:57	Saturday	735838	Malicious Mischief	Vandalism	Malicious Mischief, Vandalism to Vehic	Ingliside
15	5/24/2019 18:45	Friday	804508	Assault	Simple Assault	Battery	Central
16	1/25/2019 11:00	Friday	762975	Motor Vehicle Theft	Motor Vehicle Theft	Vehicle, Recovered, Stolen outside SF	Ingliside
17	3/28/2019 21:00	Thursday	784690	Malicious Mischief	Vandalism	Malicious Mischief, Vandalism to Vehic	Ingliside
18	5/14/2018 14:00	Monday	719451	Case Closure	Case Closure	Case Closure	Bayview

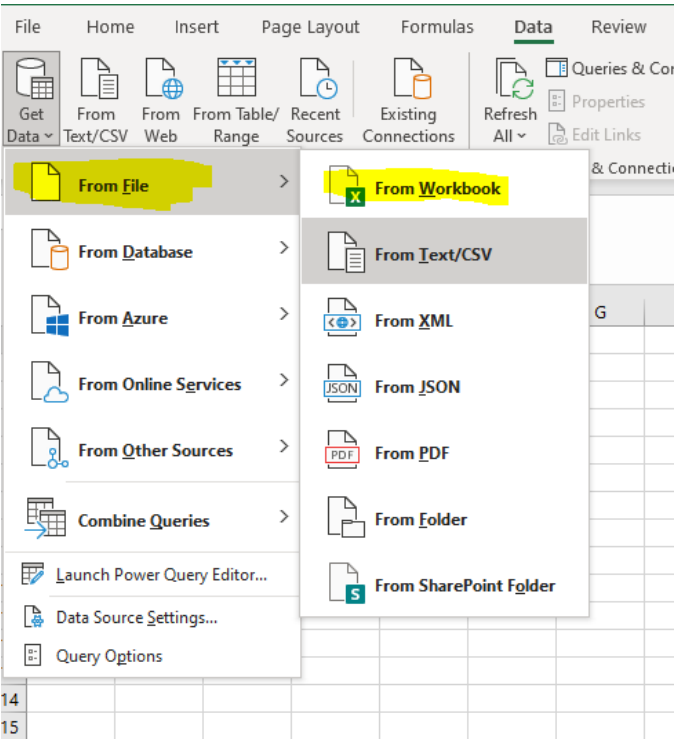
POWER QUERY – WHERE TO START

The screenshot illustrates the process of connecting to an Excel workbook in Power Query. The 'Data' tab ribbon is active, and the 'From File' > 'From Workbook' path is highlighted. The 'Import Data' dialog box is open, showing a table of incident data. Below the dialog, a Windows File Explorer window shows the file path 'C:\Users\osg4964\Documents\PROJECTS\Area_6' containing files like 'CrimeData.xlsx', 'StopData.xls', and 'StopData.xlsx'.

Incident Category	Incident Su
7 Larceny Theft	Larceny The
9 Motor Vehicle Theft	Motor Vehi
3 Larceny Theft	Larceny - Fr
4 Warrant	Other
0 Other Offenses	Other
4 Larceny Theft	Larceny The
5 Other Miscellaneous	Other
8 Burglary	Burglary - C
6 Offences Against The Family And	Other

Name	Date modified	Type	Size
CrimeData.xlsx	1/16/2023 11:43 AM	Microsoft Excel W...	3,721 KB
StopData.xls	12/12/2022 7:41 AM	Microsoft Excel 97...	3,038 KB
StopData.xlsx	12/12/2022 7:44 AM	Microsoft Excel W...	905 KB

POWER QUERY – CONNECT TO EXCEL FILE



Police_Department_Incident_Reports__2018_to_Present.csv

File Origin: 1252: Western European (Windows) | Delimiter: Comma | Data Type Detection: Based on first 200 rows

Incident Datetime	Incident Date	Incident Time	Incident Year	Incident Day of Week	Report Datetime	Row ID	Incident ID
3/5/2019 9:00:00 PM	3/5/2019	9:00:00 PM	2019	Tuesday	3/7/2019 12:54:00 PM	77808706372	778
12/22/2018 12:00:00 PM	12/22/2018	12:00:00 PM	2018	Saturday	12/26/2018 2:29:00 PM	75246907023	752
8/24/2018 5:30:00 PM	8/24/2018	5:30:00 PM	2018	Friday	8/24/2018 7:35:00 PM	70675306243	706
10/20/2018 3:10:00 PM	10/20/2018	3:10:00 PM	2018	Saturday	10/20/2018 3:10:00 PM	72826462071	728
6/5/2019 12:36:00 AM	6/5/2019	12:36:00 AM	2019	Wednesday	6/5/2019 12:37:00 AM	80823030140	808
2/12/2019 7:00:00 AM	2/12/2019	7:00:00 AM	2019	Tuesday	2/12/2019 9:20:00 AM	76962406304	769
12/7/2018 12:30:00 PM	12/7/2018	12:30:00 PM	2018	Friday	12/7/2018 12:35:00 PM	74573526200	745
10/4/2018 9:00:00 AM	10/4/2018	9:00:00 AM	2018	Thursday	10/4/2018 9:00:00 AM	72557805053	725
5/17/2019 5:00:00 PM	5/17/2019	5:00:00 PM	2019	Friday	5/18/2019 1:49:00 PM	80221615161	802
1/31/2019 1:24:00 PM	1/31/2019	1:24:00 PM	2019	Thursday	1/31/2019 1:24:00 PM	76530103034	765
2/15/2019 11:30:00 PM	2/15/2019	11:30:00 PM	2019	Friday	2/16/2019 1:07:00 AM	77146471000	771
5/24/2019 4:16:00 PM	5/24/2019	4:16:00 PM	2019	Friday	6/11/2019 3:54:00 AM	81049809029	810
11/10/2018 1:57:00 AM	11/10/2018	1:57:00 AM	2018	Saturday	11/10/2018 2:19:00 AM	73583828160	735
5/24/2019 6:45:00 PM	5/24/2019	6:45:00 PM	2019	Friday	5/24/2019 6:49:00 PM	80450804134	804
1/25/2019 11:00:00 AM	1/25/2019	11:00:00 AM	2019	Friday	1/25/2019 11:00:00 AM	76297507055	762
3/28/2019 9:00:00 PM	3/28/2019	9:00:00 PM	2019	Thursday	3/29/2019 8:30:00 AM	78469028160	784
5/14/2018 2:00:00 PM	5/14/2018	2:00:00 PM	2018	Monday	5/14/2018 2:00:00 PM	71945175030	719
12/7/2019 2:00:00 AM	12/7/2019	2:00:00 AM	2019	Saturday	12/7/2019 10:00:00 AM	87951071000	879
7/26/2020 4:00:00 PM	7/26/2020	4:00:00 PM	2020	Sunday	7/27/2020 9:48:00 AM	94769471000	947
10/31/2018 12:00:00 PM	10/31/2018	12:00:00 PM	2018	Wednesday	11/1/2018 6:30:00 PM	73337871000	733

Buttons: Load, Transform Data, Cancel

POWER QUERY – POWER QUERY EDITOR

The screenshot shows the Power Query Editor interface. The ribbon at the top contains various tabs and groups of icons. The Queries list on the left shows 'Table1'. The Formula Bar contains the M formula: `= Table.TransformColumnTypes(Source,{{"Names", type text}, {"Scores", Int64.Type}})`. The Data Preview table shows 20 rows of data with columns 'Names' and 'Scores'. The Query Settings pane on the right shows the 'APPLIED STEPS' list with 'Source' and 'Changed Type'.

APC	Names	Scores
1	Darby Mcnutt	30
2	Luke Pedro	32
3	Angele Westgate	60
4	Micheal Marquez	76
5	Milly Shill	32
6	Dona Enders	38
7	Emely Outler	71
8	Sandy Guild	89
9	Yvette Jagers	64
10	Farah Matzke	73
11	Ardella Grasty	37
12	Weston Balli	36
13	Shameka Symonds	69
14	Annalisa Mcgovern	93
15	Classie Font	87
16	Elene Havel	47
17	Nevada Edgley	65
18	Mui Reiss	46
19	Riva Kuhl	58
20	Dione Nordman	59

1. Ribbon

2. Applied Steps

3. Queries

4. Formula Bar

5. Data Preview

POWER QUERY – EDITING CONNECTED DATA

Police_Department_Incident_Reports_2018_to_Present - Power Query Editor

File Home Transform Add Column View

Close & Load Refresh Advanced Editor Manage Query

Choose Columns Remove Columns Keep Rows Remove Rows Split Column Group By Data Type: Date/Time Use First Row as Headers Replace Values Merge Queries Append Queries Combine Files Manage Parameters Data source settings New Source Recent Sources Enter Data

Queries [1] Police_Department_I...

Table.TransformColumnTypes(#"Promoted Headers",{"Incident Datetime", type datetime}, {"Incident Date", type date}, {"Incident Time", type time}, {"Incident Year", Int64.Type}, {"Incident Day of

	Incident Datetime	Incident Date	Incident Time	Incident Year	Incident Day of Week	Report Datetime	Row ID	Incident ID	Incident Number
1	3/5/2019 9:00:00 PM	3/5/2019	9:00:00 PM	2019	Tuesday	3/7/2019 12:54:00 PM	77808706372	778087	1960
2	12/22/2018 12:00:00 PM	12/22/2018	12:00:00 PM	2018	Saturday	12/26/2018 2:29:00 PM	75246907023	752469	1809
3	8/24/2018 5:30:00 PM	8/24/2018	5:30:00 PM	2018	Friday	8/24/2018 7:35:00 PM	70675306243	706753	1806
4	10/20/2018 3:10:00 PM	10/20/2018	3:10:00 PM	2018	Saturday	10/20/2018 3:10:00 PM	72826462071	728264	1806
5	6/5/2019 12:36:00 AM	6/5/2019	12:36:00 AM	2019	Wednesday	6/5/2019 12:37:00 AM	80823030140	808230	1904
6	2/12/2019 7:00:00 AM	2/12/2019	7:00:00 AM	2019	Tuesday	2/12/2019 9:20:00 AM	76962406304	769624	1901
7	12/7/2018 12:30:00 PM	12/7/2018	12:30:00 PM	2018	Friday	12/7/2018 12:35:00 PM	74573526200	745735	1809
8	10/4/2018 9:00:00 AM	10/4/2018	9:00:00 AM	2018	Thursday	10/4/2018 9:00:00 AM	72557805053	725578	1805
9	5/17/2019 5:00:00 PM	5/17/2019	5:00:00 PM	2019	Friday	5/18/2019 1:49:00 PM	802221615161	802216	1903
10	1/31/2019 1:24:00 PM	1/31/2019	1:24:00 PM	2019	Thursday	1/31/2019 1:24:00 PM	76530103034	765301	1900
11	2/15/2019 11:30:00 AM	2/15/2019	11:30:00 AM	2019	Friday	2/16/2019 1:07:00 AM	77146471000	771464	1960
12	5/24/2019 4:16:00 PM	5/24/2019	4:16:00 PM	2019	Friday	6/11/2019 3:54:00 PM	81049809029	810498	1904
13	11/10/2018 1:57:00 AM	11/10/2018	1:57:00 AM	2018	Saturday	11/10/2018 2:19:00 AM	73583828160	735838	1808
14	5/24/2019 6:45:00 PM	5/24/2019	6:45:00 PM	2019	Friday	5/24/2019 6:49:00 PM	80450804134	804508	1903
15	1/25/2019 11:00:00 AM	1/25/2019	11:00:00 AM	2019	Friday	1/25/2019 11:00:00 AM	76297507055	762975	1900
16	3/28/2019 9:00:00 PM	3/28/2019	9:00:00 PM	2019	Thursday	3/29/2019 8:30:00 AM	78469028160	784690	1902
17	5/14/2018 2:00:00 PM	5/14/2018	2:00:00 PM	2018	Monday	5/14/2018 2:00:00 PM	71945175030	719451	1803
18	12/7/2019 2:00:00 AM	12/7/2019	2:00:00 AM	2019	Saturday	12/7/2019 10:00:00 AM	87951071000	879510	1962
19	7/26/2020 4:00:00 PM	7/26/2020	4:00:00 PM	2020	Sunday	7/27/2020 9:48:00 AM	94769471000	947694	2061
20	10/31/2018 12:00:00 PM	10/31/2018	12:00:00 PM	2018	Wednesday	11/1/2018 6:30:00 PM	73337871000	733378	1862
21	6/17/2019 5:00:00 PM	6/17/2019	5:00:00 PM	2019	Monday	6/19/2019 5:42:00 PM	81391217000	813912	1961
22	11/18/2018 8:20:00 PM	11/18/2018	8:20:00 PM	2018	Sunday	11/18/2018 9:10:00 PM	73895706244	738957	1808
23	4/6/2019 11:30:00 PM	4/6/2019	11:30:00 PM	2019	Saturday	4/7/2019 1:55:00 PM	78913106154	789131	1960
24	12/16/2018 4:45:00 PM	12/16/2018	4:45:00 PM	2018	Sunday	12/16/2018 5:44:00 PM	74867406301	748674	1809
25	4/10/2019 9:00:00 PM	4/10/2019	9:00:00 PM	2019	Wednesday	4/11/2019 12:36:00 AM	78958506244	789585	1960
26	4/9/2019 4:32:00 PM	4/9/2019	4:32:00 PM	2019	Tuesday	4/9/2019 4:32:00 PM	78869603044	788696	1902
27	10/9/2018 11:00:00 AM	10/9/2018	11:00:00 AM	2018	Tuesday	10/16/2018 11:15:00 AM	72769906372	727699	1862
28	1/4/2019 9:20:00 AM	1/4/2019	9:20:00 AM	2019	Friday	1/4/2019 9:27:00 PM	7579064085	757906	1900
29	3/19/2019 6:41:00 PM	3/19/2019	6:41:00 PM	2019	Tuesday	3/19/2019 6:41:00 PM	78140964085	781409	1901
30	4/16/2019 11:06:00 AM	4/16/2019	11:06:00 AM	2019	Tuesday	4/16/2019 11:06:00 AM	79102464085	791024	1902
31	12/20/2018 10:00:00 PM	12/20/2018	10:00:00 PM	2018	Thursday	12/21/2018 11:46:00 AM	75071327195	750713	1809
32	1/5/2019 10:04:00 PM	1/5/2019	10:04:00 PM	2019	Saturday	1/5/2019 10:09:00 PM	75621126170	756211	1900
33	1/20/2019 12:51:00 AM	1/20/2019	12:51:00 AM	2019	Sunday	1/20/2019 12:51:00 AM	76113465015	761134	1900
34	8/18/2018 10:58:00 AM	8/18/2018	10:58:00 AM	2018	Saturday	8/18/2018 11:11:00 AM	70439704092	704397	1806
35	9/24/2018 7:38:00 PM	9/24/2018	7:38:00 PM	2018	Monday	9/24/2018 7:40:00 PM	71822264020	718222	1807
36	6/6/2019 2:46:00 AM	6/6/2019	2:46:00 AM	2019	Thursday	6/6/2019 2:47:00 AM	80879165016	808791	1904
37	11/6/2018 8:15:00 AM	11/6/2018	8:15:00 AM	2018	Tuesday	11/6/2018 8:27:00 AM	73453764020	734537	1808
38	12/23/2018 9:15:00 PM	12/23/2018	9:15:00 PM	2018	Sunday	12/24/2018 1:57:00 AM	75343306224	753433	1862
39	4/21/2019 12:00:00 PM	4/21/2019	12:00:00 PM	2019	Sunday	4/22/2019 12:43:00 AM	79430506244	794305	1960
40	11/8/2018 9:54:00 PM	11/8/2018	9:54:00 PM	2018	Thursday	11/8/2018 9:55:00 PM	73543665015	735436	1808
41	4/8/2019 3:25:00 AM	4/8/2019	3:25:00 AM	2019	Monday	4/8/2019 3:38:00 AM	78801326032	788013	1902
42	11/17/2018 11:00:00 AM	11/17/2018	11:00:00 AM	2018	Saturday	11/18/2018 10:30:00 AM	73982806244	739828	1862
43	5/25/2019 6:30:00 PM	5/25/2019	6:30:00 PM	2019	Saturday	5/25/2019 8:44:00 PM	80476806244	804768	1903
44	8/27/2018 4:34:00 PM	8/27/2018	4:34:00 PM	2018	Monday	8/27/2018 4:34:00 PM	70776607041	707766	1806

Query Settings

PROPERTIES

Name
Police_Department_Incident_Reports_20

All Properties

APPLIED STEPS

- Source
- Promoted Headers
- Changed Type

34 COLUMNS, 999+ ROWS Column profiling based on top 1000 rows

PREVIEW DOWNLOADED AT 10:26 AM

POWER QUERY – TYPE OF DATA

Minimize the Navigator Pane

= Table.TransformColumnTypes(#"Promoted Headers",{"Incident Datetime", type datetime}, {"Incident Date", type date}, {"Incident Time", type time}, {"Incident Year", Int64.Type}, {"Incident Day of Week", type text}, {"Report Datetime", type datetime}, {"Row ID", type text}, {"Incident ID", type text}, {"Incident Number", type text})

	Incident Datetime	Incident Date	Incident Time	Incident Year	Incident Day of Week	Report Datetime	Row ID	Incident ID	Incident Number
1	3/5/2019 9:00:00 PM	3/5/2019	9:00:00 PM	2019	Tuesday	3/7/2019 12:54:00 PM	77808706372	778087	1960
2	12/22/2018 12:00:00 PM	12/22/2018	12:00:00 PM	2018	Saturday	12/26/2018 2:29:00 PM	75246907023	752469	1809
3	8/24/2018 5:30:00 PM	8/24/2018	5:30:00 PM	2018	Friday	8/24/2018 7:35:00 PM	70675306243	706753	1806

POWER QUERY – LOAD MORE DATA

The screenshot shows a Power Query dialog box for the 'Incident Datetime' column. The dialog includes sorting options (Sort Ascending, Sort Descending, Clear Sort), a filter section (Clear Filter, Remove Empty, Date/Time Filters), and a search box. A list of 18 date and time entries is displayed, all with checked selection boxes. A yellow highlight is placed over the 'Load more' button at the bottom right of the list. Below the list, a warning icon and the text 'List may be incomplete.' are visible. At the bottom of the dialog are 'OK' and 'Cancel' buttons. The background shows a spreadsheet with the column header 'Incident Datetime' and a status bar at the bottom indicating '30' and '4/16/2019 11:06:00 AM'.

Incident Datetime
1/18/2018 11:47:00 AM
1/31/2018 12:00:00 PM
3/24/2018 3:00:00 PM
4/2/2018 12:07:00 PM
4/21/2018 12:15:00 AM
5/14/2018 2:00:00 PM
7/5/2018 5:00:00 AM
7/6/2018 8:30:00 AM
7/24/2018 10:00:00 AM
8/6/2018 12:00:00 PM
8/7/2018 7:00:00 PM
8/9/2018 11:00:00 AM
8/10/2018 2:30:00 PM
8/12/2018 9:00:00 PM
8/13/2018 12:28:00 PM
8/14/2018 4:52:00 PM
8/14/2018 5:45:00 PM

POWER QUERY – WHERE TO START

File Home Transform Add Column View

Formula Bar
 Monospaced
 Column distribution
 Always allow

Show whitespace
 Column profile

Column quality

Query Settings
 Query Dependencies

Layout Data Preview Columns Parameters Advanced Dependencies

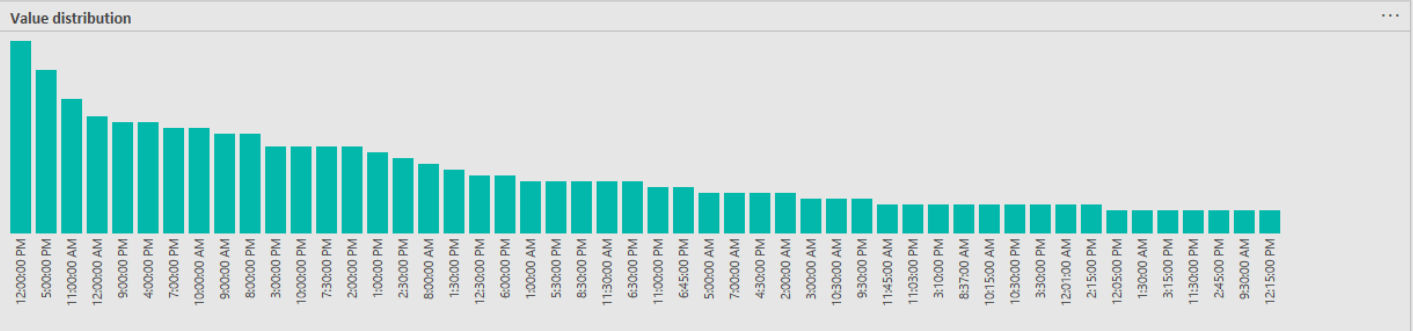
Queries [1] Police_Department_L...

Table.TransformColumnTypes(#"Promoted Headers",{"Incident Datetime", type datetime}, {"Incident Date", type date}, {"Incident Time", type time}, {"Incident Year", Int64.Type}, {"Incident Day of Week", type text}, {"Report Datetime", type datetime}, {"Row ID", type text}, {"Incident ID", type text}, {"Incident Number", type text})

	Incident Datetime	Incident Date	Incident Time	Incident Year	Incident Day of Week	Report Datetime	Row ID	Incident ID	Incident Number
1	3/5/2019 9:00:00 PM	3/5/2019	9:00:00 PM	2019	Tuesday	3/7/2019 12:54:00 PM	77808706372	778087	1960
2	12/22/2018 12:00:00 PM	12/22/2018	12:00:00 PM	2018	Saturday	12/26/2018 2:29:00 PM	75246907023	752469	1809
3	8/24/2018 5:30:00 PM	8/24/2018	5:30:00 PM	2018	Friday	8/24/2018 7:35:00 PM	70675306243	706753	1806
4	10/20/2018 3:10:00 PM	10/20/2018	3:10:00 PM	2018	Saturday	10/20/2018 3:10:00 PM	72826462071	728264	1806
5	6/5/2019 12:36:00 AM	6/5/2019	12:36:00 AM	2019	Wednesday	6/5/2019 12:37:00 AM	80823030140	808230	1904
6	2/12/2019 7:00:00 AM	2/12/2019	7:00:00 AM	2019	Tuesday	2/12/2019 9:20:00 AM	76962406304	769624	1901
7	12/7/2018 12:30:00 PM	12/7/2018	12:30:00 PM	2018	Friday	12/7/2018 12:35:00 PM	74573526200	745735	1809
8	10/4/2018 9:00:00 AM	10/4/2018	9:00:00 AM	2018	Thursday	10/4/2018 9:00:00 AM	72557805053	725578	1805
9	5/17/2019 5:00:00 PM	5/17/2019	5:00:00 PM	2019	Friday	5/18/2019 1:49:00 PM	80221615161	802216	1903
10	1/31/2019 1:24:00 PM	1/31/2019	1:24:00 PM	2019	Thursday	1/31/2019 1:24:00 PM	76530103034	765301	1900
11	2/15/2019 11:30:00 PM	2/15/2019	11:30:00 PM	2019	Friday	2/16/2019 1:07:00 AM	77146471000	771464	1960
12	5/24/2019 4:16:00 PM	5/24/2019	4:16:00 PM	2019	Friday	6/11/2019 3:54:00 PM	81049809029	810498	1904
13	11/10/2018 1:57:00 AM	11/10/2018	1:57:00 AM	2018	Saturday	11/10/2018 2:19:00 AM	73583828160	735838	1808
14	5/24/2019 6:45:00 PM	5/24/2019	6:45:00 PM	2019	Friday	5/24/2019 6:49:00 PM	80450804134	804508	1903
15	1/25/2019 11:00:00 AM	1/25/2019	11:00:00 AM	2019	Friday	1/25/2019 11:00:00 AM	76297507055	762975	1900
16	3/28/2019 9:00:00 PM	3/28/2019	9:00:00 PM	2019	Thursday	3/29/2019 8:30:00 AM	78469028160	784690	1902
17	5/14/2018 2:00:00 PM	5/14/2018	2:00:00 PM	2018	Monday	5/14/2018 2:00:00 PM	71945175030	719451	1803
18	12/7/2019 2:00:00 AM	12/7/2019	2:00:00 AM	2019	Saturday	12/7/2019 10:00:00 AM	87951071000	879510	1962
19	7/26/2020 4:00:00 PM	7/26/2020	4:00:00 PM	2020	Sunday	7/27/2020 9:48:00 AM	94769471000	947694	2061
20	10/31/2018 12:00:00 PM	10/31/2018	12:00:00 PM	2018	Wednesday	11/1/2018 6:30:00 PM	73337871000	733378	1862
21	6/17/2019 5:00:00 PM	6/17/2019	5:00:00 PM	2019	Monday	6/19/2019 5:42:00 PM	81391271000	813912	1961
22	11/18/2018 8:20:00 PM	11/18/2018	8:20:00 PM	2018	Sunday	11/18/2018 9:10:00 PM	73895706244	738957	1808
23	4/6/2019 11:30:00 PM	4/6/2019	11:30:00 PM	2019	Saturday	4/7/2019 1:55:00 PM	78913106154	789131	1960
24									

Column statistics

Count	1000
Error	0
Empty	0
Distinct	410
Unique	269
Min	12:00:00...
Max	11:58:00...



ADDITIONAL INFORMATION

✓ Books

- ✓ *Collect, Combine, and Transform Data Using Power Query in Excel and Power BI* (2018) by Gil Raviv

✓ Websites

- ✓ <http://datachant.com>
- ✓ <https://blog.crossjoin.co.uk>
- ✓ <http://excel-inside.pro>
- ✓ <https://www.myonlinetraininghub.com/blog>
- ✓ <https://excelchamps.com/power-query>

NEXT WEBINAR

- ✓ **Transforming Data in Power Query**
 - ✓ *Data format*
 - ✓ *Add/remove columns*
 - ✓ *Formatting and extracting time/date*

CONCLUSIONS & QUESTIONS

