index

A
AAD. See Azure Active Directory
access token 476
ACE OLE DB provider 224
AcquireTokenAsync 483
active relationships 238
Admin Portal 69, 361
Admin role 372
aggregation hits 179
aggregation table 178
aggregations 176
AI Transforms 352
alerts 20, 106, 110, 124
in Power BI Mobile 130
ALL function 262, 275
ALLEXCEPT function 262
ALLNOBLANKROW function 262
Always On 160
Analysis Services
connecting to 65, 148
importing data from 168
integrating with Power BI 419
analytical features 247
Analytics tab 79
Analyze in Excel 51, 101, 365, 390
for drilling through 301
Android native app 125
animation 499
annotations 24, 137
application registration 447
apps 23, 48
creating 377
navigation 377
removing 378
AppSource 35, 37, 61, 78, 378
ArcGIS 84, 366
Area Chart 81
Arria visual 315
attributes 141
auditing 367
AuthenticationContext class 452
AuthenticationResult 476
auto recovery 154
AutoComplete 261
Automated Machine Learning. See AutoML
AutoML
  evaluating 342
  training 342
AVERAGEX function 261
Azure Active Directory 28, 46
  external users 382
Azure Analysis Services 53
Azure Cognitive Services 352
Azure Data Catalog 11
Azure Data Factory 11
Azure DevOps 351
Azure Event Hubs 432
Azure Kubernetes Service 350
Azure Machine Learning 7, 11, 36, 346
Azure Management Portal 449
Azure Maps 83
Azure SQL Data Warehouse 30
Azure SQL Database 53
Azure Stream Analytics 11, 432, 433
Azure Synapse Analytics 53
Azure Table Storage 11
Azure Traffic Manager 28
AzureML 352
B
B2B 381
B2C 381
background image 292
Bar Chart 80, 92
Basic Map 83
BI pro 35
Binary data type 223
binary prediction 339
binning 305
BISM 415
bitness considerations 150
bookmarks 316
Bookmarks pane 317
Bookmarks Pane 156, 316
branding 363
Build permission 389
Bullet Chart 89
business intelligence 1
business user 31
C
CALCULATE function 262, 263, 275
  and row context 255
  introducing 255
  implementing 266
  storage 255
  when to use 256
calculated tables 265
CALCULATETABLE function 262
CALENDAR function 143
CALENDARAUTO function 143
calendars 369
Canvas 37
Canvas apps 319
capacity Admins 400
capacity Assignment 400
capacity nodes 395
capacity settings 401
capacity utilization 402
capacity workloads 402
CDM folders 212
certified datasets 365, 389
certified entities 209
chromeless mode 51
cloud services 18, 53
Clustered Bar Chart 80
Clustered Column Chart 80
clustering 327
collaborative features 368
Column Chart 80, 92, 94
column from examples 186, 193
columns
  hiding 225
  referencing in DAX 260
  removing 225
  renaming 225
  resizing 224
  sorting 226
columnstore index 6
Combination Chart 81
Combo Chart 94
comments 69, 73, 107
  in Power BI Mobile 135
Common Data Model 207, 319
Common Data Service for Apps 208
community 157
composite models 34, 173
cmpute target 349
computed entity 211
conditional access 359
conditional formatting 83, 307
confidential data 392
consulting services 157
Content Delivery Network 29
cost packs 51
Contributor role 372
conversations  see comments
correlations 96
Cosmos DB 11
Cost-Benefit Analysis chart 343
COUNT function 261, 262
COUNTA function 262
COUNTAX function 261, 262
COUNTBLANK function 262
COUNTROWS function 262
Create Relationship window 242
cross filter direction 242
cross filtering 145, 239
cross highlighting 19
crosstab report 294
CSS 490
CSV files 167
Cumulative Gains chart 344
Currency data type 223
custom apps
permissions 448
registering in Azure 449
registering in Power BI 474
custom columns
adding in query 193
in Query Editor 184
custom connectors 159
custom page sizes 71
custom sorting 221, 226
custom visuals 34, 37
capabilities 500
debugging 494
enabling 366
host integration 487
importing 78, 504
packaging 502
publishing 503
understanding 88, 486
CustomData 383
D
D3.js 37, 490
dashboards
actions 59
API 440
creating 59
defined 58
distributing 59
duplicating 112
featured 47
in Power BI portal 49
mobile viewing 128
options for creating 114
printing 112
sharing 113
sharing in Power BI Mobile 136
tagging 390
understanding 105
working with 120
Data Analysis Expressions 416
data analyst 33
data bars 307
data categories 250
data classification 366, 390
data collation 221
data connectors 37
data entry form 321
data frames 335
data governance 387
data import API 442
Data Lake 212
data mart 415
Data Mining add-in 7
data models
publishing 153
understanding 140
data point table 300
data profiling 187
data refresh 374
data region 357
data security 280
and embedding 483
and workspaces 372
testing 283
data source settings 227
Data views
managing 411
types of access 53
data staging 209
data storytelling 312
data types 223
reason for changing 224
Data View 165, 219
data warehouse 415
data warehousing 35, 41
Data-driven Documents see D3.js
dataflow entities 210
dataflows 402
connecting to 215
enabling 366
exporting 215
introduced 22
settings 363
storage 211
used for AutoML 338
when to use 209
Data Roles 500
datasets
actions 54
creating programmatically 453
definitions 438
deleting 55
understanding 52
Data View object 497
Data View Mappings 500
Datazen 11
Date data type 223
date tables
autogenerated 252
creating with Power Query 203
importing 165
understanding 143
DATEADD function 265
DATESBETWEEN function 265
DATEDFINPERIOD function 265
DATESMONT function 265
DATESQTD function 265
DAX 254, 416
functions 261
operators 260
understanding 254
DAX Studio 274
DAXMD 148
Decimal Number data type 223
Decision Tree 349
Decomposition Tree 87, 331
default aggregation 251
default RetentionPolicy 442
denormalization 142
descriptive analytics 3
DevOps 419
diagram view 215
dimensions 41, 142
DirectQuery 147, 416
limitations 176
DirSync 356
display folders 251
distinct count 179
DISTINCT function 262
DISTINCTCOUNT function 262
distribution lists 360
DIVIDE function 275
DNS Service 29
Doughnut Chart 82
drill across 299
drill down 77, 292, 299
drill through 57, 59, 106, 122, 130, 300
drillthrough filters 301, 302
drillthrough pages 301
dual storage 174
duplicating pages 77
Duration data type 223
dynamic data security 285
Dynamic Management Views 274
Dynamics CRM 18, 32
EARLIER function 262
EARLIEST function 262
Edit Interactions 294
Effective identity 484
EffectiveUserName 409, 420
embed codes 69, 363
embed configuration 465
embed token 483
embedded capacity 458
embedding reports 37
encrypted connections 153, 160
endorsing datasets 388
Enter Data 172
e numerateObjectInstances 501
error handling 196
Esri 84
ETL 41, 42, 181
Excel
connecting to 98
Excel files
importing 63, 165
reporting options 103
Excel Online 134
Excel reports 67
in Power BI Mobile 134
ExecutionLog 413
experiments 349
explain increase/decrease 74
Explain Increase/Decrease 325
explicit measures
implementing 274
introducing 257
exporting data 74, 365
external sharing 365, 381

fact tables 41, 141
favorites 24, 111
features 339
fields 141
adding to reports 80
and icons 79
Fields pane 79
Filled Map 84
FILTER function 262
Filter pane 133
filtering data 192
in Data View 222
filters
compared to slicers 297
hiding 298
locking 298
fixed-length files 168
Flow 37

focus mode 107, 295
forecasting 79, 326
foreign key 144
Format Painter 155
formatting columns 224
Forms Authentication 479
formula bar
in Data View 260
in Query Editor 188
fully-additive measures 280
Funnel Chart 82

Gateway 36, 53, 147
defined 54
Gateway Role 29
gateways
comparing 384
Gauge 85
GDPR 45
general classification 339
GenerateTokenRequest 483
geo fields 79
Geoflow 8
Geography data type 223
GeoJSON 84
Get Data page 48
Get Datasets API 467
Get Groups API 464
Get Reports API 469
Get Tiles API 464
GetAccessToken 476
GetAuthorizationCode 476
geplot2 333
global search 47, 366
GlobeMap 8, 17
Google Analytics 18, 32, 54, 61
gridlines 76, 156
grouping data 304
grouping items 293

H
HDInsight 11, 53
hierarchies 248, 249
HTML5 23
HTTP verbs 439
hybrid BI solutions 36

I
image areas 311
images 310
implicit measures 257
implementing 270
implicit relationships 417
importing data 53, 146
filtering 163
from relational databases 162
from text files 167
from Web 170
inactive relationships 239, 245
incremental refresh 214, 232
individual subscriptions 119, 409
inference pipeline 349
in-focus mode 73
in-line date hierarchies 249
Inner Join 198
interactive data analysis 417
interactive features 19, 72, 73
in native apps 131
interactive highlighting 72
Internet of Things 36, 428
iOS 23
iOS native app 123
IoT See Internet of Things
iPad 123
iPhone 124
IVisual interface 488

JavaScript Object Notation See JSON
JSON 156, 207, 212, 215

K
Kerberos 386
key columns 144
Key Influencers 86, 329
key metrics 47
KPI 85, 169

L
large datasets 419
LASTNONBLANK function 280
Left Outer Join 198
licenses 358
lift chart 344
Line Chart 81
lineage view 60
linguistic schema 156, 315
linked entity 211
links 306
live connections 18, 30, 48, 53, 65
locking objects 156
logo 291
lookup tables 142
LOOKUPVALUE function 262, 278, 286

M
M 187
M language 37, 183
INDEX 513

mail-enabled groups 360
Many-to-Many cardinality 237
many-to-many relationships 279
Map 295
Map Shaper 84
Map visual 295
maps 83
Marketo 18
Master Data Services 11
Matrix visual 83, 94, 294
MAX function 261
MAXX function 261
MDX 170, 416
measures
  implicit vs. explicit 257
  introducing 256
  vs. calculated columns 257
  when to use? 258
Member role 372
Microsoft Data Platform 11
Microsoft Store 151
Microsoft Surface 127
MIN function 261
MINX function 261
ML Designer 347
mobile reports 134
Model View 244
Model-driven apps 319
MOLAP 416
Multi Row Card 85
Multidimensional 415
multidimensional cubes 41
Multidimensional Expressions 416
multifactor authentication 358
multi-geo support 23
My Workspace 47, 368

N
naming conventions 219
narratives 315
natural questions 116
navigation links 250
Navigator window 160
Node.js 492
NoSQL 11
Notification center 51

O
OAuth
  for native clients 446
  for web apps 445
  implementing 451
  parties 445
  three-leg flow 445
  understanding 444
OAuth2 37
ODBC 159
ODS 415
Office 365 8, 45
Office 365 Application Launcher 50
Office 365 groups 360
On premises Gateway 65, 148
  and SSAS 419
  configuring 385
  installing 384
  mapping users 421
  using 387
  vs Personal Gateway 383
OneDrive 54, 65, 99
OneDrive for Business 171
one-to-many cardinality 144
one-to-one cardinality 144
operators 260
Oracle 158
organization visuals 363
organizational apps 20
  rights 378
  understanding 376
organizational BI 3
  challenges 41
  classic solution 40, 414
  vs. personal BI 418
organizational content packs 51
outliers 96

P
page render 396, 459
page-level filter 80
paginated reports 23, 118, 403, 424
pandas 336
PARALLELPERIOD function 265
parent-child relationships 277
partner showcase 157
password policy 358
PATH function 278
PATHCONTAINS function 286
PATHITEM function 278
pbiviz file 88
pbiviz tool 492
pbix file 18
Performance inspector 112
persistent filters 56
personal gateway
  configuring 374
  phone layout 132, 156
Phone View 112
phone-optimized view 131
Pie Chart 82, 130, 295
pinning report items 408
pinning reports 116
pinning visualizations 115
pipeline 348
Power BI
  browser support 123
  data security 30
  design tenets 10
  editions 13
  problems it solves 9
  product line 5
  role in Microsoft BI 12
  signing up 44
Power BI admin 362
Power BI dataflows 212
Power BI Desktop
  availability 151
  compared with Excel 17
  defined 15
  downloading 51
  features 16
  for Power BI Report Server 408
  importing from Excel 18
  introduced 4
  updating 154
Power BI Developer Center 37, 442
Power BI editions 51
Power BI Embedded
  capacities 401
  features 25
  getting started 458
  introduced 4
  introduced 4
  licensing 25
Power BI for Office 365 9
Power BI Free 13
Power BI Mobile 33
  defined 23
  downloading 51
  features 23
  introduced 4
Power BI portal 47
Power BI Premium
  calculator 14
  introduced 4
  managing 400
  understanding 22
Power BI Publisher for Excel 102
Power BI Report Server 67
  in Power BI Mobile 128
  introduced 4
  licensing 407
  pinning items 118
  understanding 26, 404
Power BI Service
  architecture 28
  defined 4
Power BI visuals gallery 503

INDEX

513
Power Map 8
Power Pivot 6, 16
Power Platform 12
Power Query 8, 16, 181
Power View 7, 16
Power Virtual Agents 12
PowerApps 37
 integrating with Power BI 320
 introduced 12
 understanding 319
PowerShell 454
 precision 343
 predictive analytics 3, 325
 predictive experiment 3
 predictive features 3
 predictive solutions 36
 premium capacity 22, 395
 premium workspaces 397
 prescriptive analytics 3
 preview features 154
 primary key 144, 237
 probability threshold 343
 protecting data 391
 publish to web 69, 365
 publishing content 376
 PubNub 429
 push datasets 442
 Python 7, 86, 184, 336

Q
Q&A 19, 52, 156, 312
 disabling 112
 embedding 467
 for creating dashboards 59, 116
 in Power BI Desktop 155
 limitations 20
 review questions 367
 tuning 117, 314
 working with 121
Q&A Explorer 313
 QR Code
 Quick Response Code 108
 quantitative scaling 498
 queries
 appending 199
 defined 147
 disabling load 183
 disabling refresh 183
 merging 197
 query caching 399
 query diagnostics 187
 Query Editor 161, 163
 understanding 181
 query folding 189, 234
 query functions 200
 query parameters 183, 233
 creating 204
 query reduction 154
 Quick Insights 55, 106, 108
 adding to dashboard 117
 in Power BI Desktop 325
 working with 96
 quick measures 34, 272
 Quick Response Code 108
 quick styles 83

R
R 7, 86, 332, 366
 data shaping with 184
 ranking functions 265
 RANKX function 269
 Reading View 57, 68
 real-time BI 36, 428
 real-time dashboards 434
 real-time endpoint 349
 real-time tile 430
 recent sources 155, 229
 recents 47, 128
 refresh plan 412
 refresh policy 234
 refreshing data 54, 230
 regression 339
 RELATED function 262, 269
 related insights 109
 RELATEDTABLE function 262, 269
 relationship cardinality 242
 relationships
 auto-detecting 239
 auto-discovering 190
 cardinality 144
 changing to inactive 245
 creating in Data View 241
 creating in Relationships View 245
 introduced 143
 limitations 237
 managing 243, 245
 redundant paths 144
 rules 237
 strong and weak 175
 understanding 236
 reply URL 445
 Report Builder 11, 426
 report pages 68
 Report View 152
 Report Viewer control 407
 Reporting Services reports 67
 reports
 actions 56
 API 442
 defined 56
 distributing 58
 filtering by URL 472
 importing 57
 options for creating 57
 types of 67
 working with 91
 ReportServer database 408
 ReportServerTempDB 408
 resharthing dashboards 113
 REST 437
 REST APIs 37
 enabling 366
 testing 442
 Revolution Analytics 333
 Ribbon Chart 80
 ROC curve 344
 ROLAP 416
 role membership 282
 role-playing relationships 237, 245
 implementing 276
 roles
 creating 283
 testing 286
 root cause analysis 95
 row context 255
 row labels 314
 row-level security 155, 280, 285, 372
 RStudio 334

S
Salesforce 18, 32, 213
 SAMEPERIODLASTYEAR 265
 samples 49, 157
 scalability 418
 Scatter Chart 82, 130
 scheduled refresh 375
 scoring 339
 seasonality 96, 327
 security groups 361
 security policies 287
 See Records 77, 300
 segmentation 327, 331
 SELECTEDVALUE function 206
 Selection pane 317
 Selection Pane 156, 317
 self-service BI 1
 benefts 42
 cautions 43
 understanding 40
 vs. organizational BI 418
 self-service data models 34
 semantic model 415
 semi-additive measures 280
 sensitivity labels 391
 sentiment analysis 432
 service apps 61
 Shape charts 82
 Shape Map 84
shapes 77
shared capacity 22, 395
shared datasets 389
SharePoint Online 54, 65, 99
SharePoint Server 7
sharing
  items 13, 32
  options 20
    with Power BI Mobile 25
sharing options 379
show value as 272
Single Card 85, 293
Sketch Tool 126
Slicer 86, 115
slicers
  synchronizing 296
  with dates 295
snapping to grid 76
snowflake schema 142
sorting 83
sorting data
  in Data View 220
Spark 30, 53
sparkline 496
Spotlight 317
spreadmarts 43
SQL Server Data Tools 426
SQL Server Mobile Report Publisher 409
SQL Server Profiler 423
SSO 386
SSRS 170
  importing from reports 170
  KPIS 134
  limitations for Power BI 409
Stacked Bar Chart 80, 292
Stacked Column Chart 80
star schema 141
STDEV.P function 262
STDEV.S function 262
STDEVX.P function 262
STDEVX.S function 262
steady share 96
stepped layout 300
storage limits 51
stored credentials 411
stored procedures 159
streaming API 428
streaming datasets 56, 428
subscriptions 20, 97
  creating 89
  enabling 365
  limitations 90
SUM function 261, 280
SUMX function 261, 269
SVG 37
synonyms 117, 245
Synoptic Panel 311
T
table columns 220
table filters 281
Table visual 83, 294
tables
  importing 229
  renaming 226
  understanding 219
Tabular 415
  role in Power BI 29
Tabular models 41
team BI 2, 35
template apps 366
  templates 153, 365
tenant 46
tenant settings 364
text boxes 77
Text data type 223
themes 156
tile flow 59, 105
tiles
  embedding 463
  refreshing 112
  understanding 105
  working with 121
Time data type 223
time dimension 249
time intelligence functions 264
time series forecasting 326, 334
time series insights 96
tooltip page 305
tooltips 303
top N filtering 72
TopoJSON 84
TOTALYTD function 275
transactional reports 41
transforming data 191
Freemap 82, 95
TRUE/FALSE data type 223
Twitter 432
type definitions 493
TypeScript 37, 489
U
Universal Principal Name 421
unknown member 243
unmanaged tenant 356
un pivoting columns 193
URL 111
usage metrics 362
USERELATIONSHIP 262, 277
USERNAME function 285
USERPRINCIPALNAME 285, 383
V
VALUES function 262
VAR.P function 262
VAR.S function 262
VARX.P function 262
VARX.S function 262
v-cores 396
VertiPaq 146
Viewer role 372
viewers 398
Visio diagrams 311
visual header 56, 72
visual Interactions 77
VisualInitOptions 497
visualizations
  best practices 80
  formatting 78
  types of 80
Visualizations pane 77
visual-level filter 80
W
web application proxy 408
Web URL category 307
Web view 112
WebGL 37
whoami 421
Whole Number data type 223
Windows credentials 160
Windows native app 125
workspaces 47
  and Power BI Embedded 461
  bulk assignments 404
  comparing v1 and v2 370
  creating 371
  for Power BI Embedded 462
  individual assignments 404
  introduced 20
  limitations 370
  list of 363
  moving to capacity 403
  understanding 368
  writeback 320
X
XMLA endpoint 23, 235, 419
xVelocity 6, 146, 415
Y
YTD calculations 275
Increase your BI IQ!

Prologika offer consulting, implementation and training services that deliver immediate results and great ROI. Check our services, case studies, and training catalog at [https://prologika.com](https://prologika.com) and contact us today to improve and modernize your data analytics at info@prologika.com.

Currently, we offer these training courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Learn More</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Power BI</td>
<td>Power BI is a cloud-based business analytics service that gives you a single view of your most critical business data. Monitor the health of your business using a live dashboard....</td>
<td></td>
</tr>
<tr>
<td>Applied DAX with Power BI</td>
<td>Power BI promotes rapid personal BI for essential data exploration and analysis. Chances are, however, that in real life you might need to go beyond just simple aggregations....</td>
<td></td>
</tr>
<tr>
<td>Applied BI Semantic Model (Tabular and Multidimensional)</td>
<td>Targeting BI developers, this intensive 5-day class is designed to help you become proficient with Analysis Services Tabular and Multidimensional.</td>
<td></td>
</tr>
<tr>
<td>Applied Microsoft Visualization Tools</td>
<td>Reporting is an essential feature of every business intelligence solution. One way to extract and disseminate the wealth of information is to author Reporting Services standard reports....</td>
<td></td>
</tr>
<tr>
<td>Applied SQL Server Fundamentals</td>
<td>This 2-day instructor led course provides you with the necessary skills to query Microsoft SQL Server databases with Transact-SQL. It teaches novice users how to query data stored in SQL Server data structures.</td>
<td></td>
</tr>
<tr>
<td>Applied MS BI End-to-End</td>
<td>This four-day class is designed to help you become proficient with the Microsoft BI toolset and acquire skills to implement an end-to-end organizational BI solution, including data warehouse, ETL processes, and a semantic model.</td>
<td></td>
</tr>
<tr>
<td>Applied SQL Server Reporting Services</td>
<td>This intensive 4-day class is designed to help you become proficient with Microsoft SQL Server Reporting Services and acquire the necessary skills to author, manage, and deliver reports.</td>
<td></td>
</tr>
<tr>
<td>Applied Master Data Management and Data Quality</td>
<td>Organizations that invest in master data management and improving the quality of their informational assets will be best positioned to reap....</td>
<td></td>
</tr>
<tr>
<td>Applied SQL Server Analysis Services (Multidimensional)</td>
<td>This intensive 4-day class is designed to help you become proficient with Analysis Services (Multidimensional) and acquire the necessary skills to implement OLAP and data mining solutions.</td>
<td></td>
</tr>
<tr>
<td>Applied Excel and Analysis Services</td>
<td>This 1-day class is designed to help business users become proficient with using the Excel BI features to analyze corporate data in Analysis Services Multidimensional cubes or Tabular models.</td>
<td></td>
</tr>
<tr>
<td>Applied Power BI with Excel</td>
<td>Power BI is a suite of products for personal business intelligence (BI). It brings the power of Microsoft's Business Intelligence platform to business users. At the same time, Power BI lets IT monitor and manage published....</td>
<td></td>
</tr>
<tr>
<td>Customized Classes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>