Documentation Library

Data Explorer

Questions & Answers

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Welcome to Data Explorer

This document contains an overview of aXes Data Explorer (referred to as DE) and questions and answers about DE.

DE provides query tools to retrieve data from databases on IBM i (System i, iSeries or AS/400) servers. Typical tasks are:

- Search for database tables using DE table filters
- Create queries with Structured Query Language (SQL)
- Run the queries to retrieve data from database tables
- Save the query definitions in folders ready for use again
- Download the data produced by queries to your computer or mobile device

Once you have downloaded or copied the query data, you can import the query data into business applications like Microsoft Excel and Word.

For information about aXes products, refer to the aXes web site www.axeslive.com.

What is Data Explorer?

DE is a Web application that you use to query database tables on an IBM i server. The DE page consists of two panes. The left-hand pane is the search filter and folder navigation pane. It contains filters used for table searches, queries and folders where you save the filters. The right hand pane consists of one or more tabs. The tabs contain table search results, query data, forms for editing queries and search criteria and setting options.

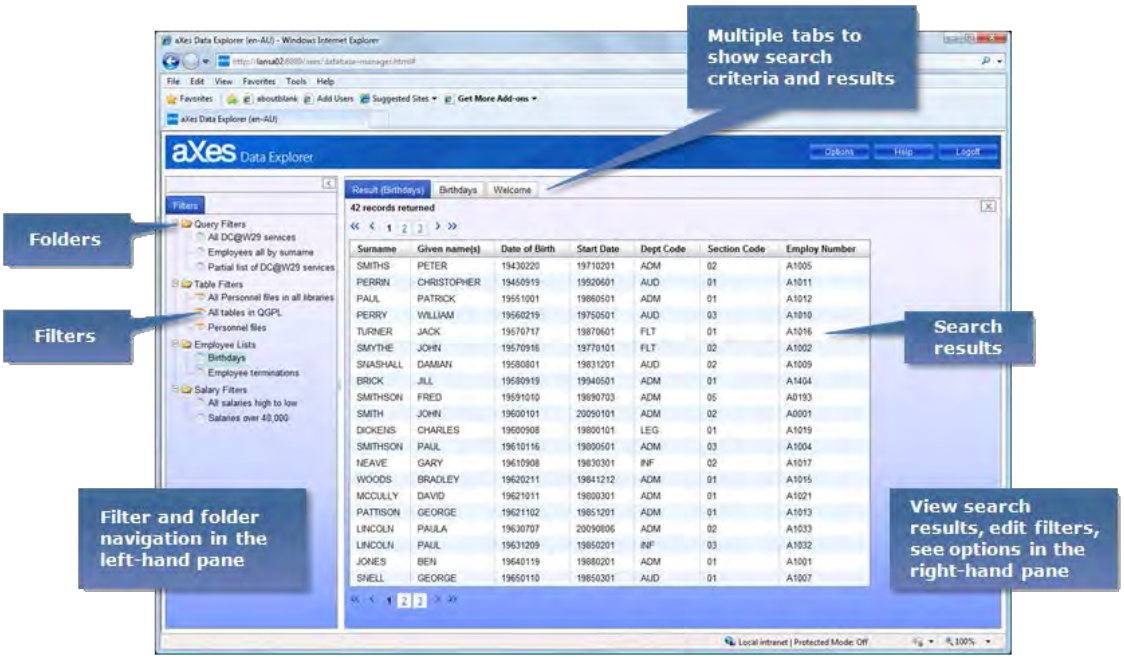

Figure 1: Data Explorer Screen Components and Layout

Figure 1 (page 3) shows three tabs in the right hand pane. The visible tab, labelled “Result (Birthdays)”, presents the query data obtained by running a query filter. The second tab (out of view) titled Birthdays is the edit tab for the query filter and the third tab is the Welcome page (also out of view).

Figure 2 (page 4) shows a floating menu with options for working with query data. The options are viewing all or selected rows in the query data and copying all or selected rows.

Clicking the left mouse button on a row in the list will select the row. Holding the Ctrl key and clicking on multiple rows will select the rows.

Clicking the right mouse button on a selected row opens the floating menu showing options for working with query data.

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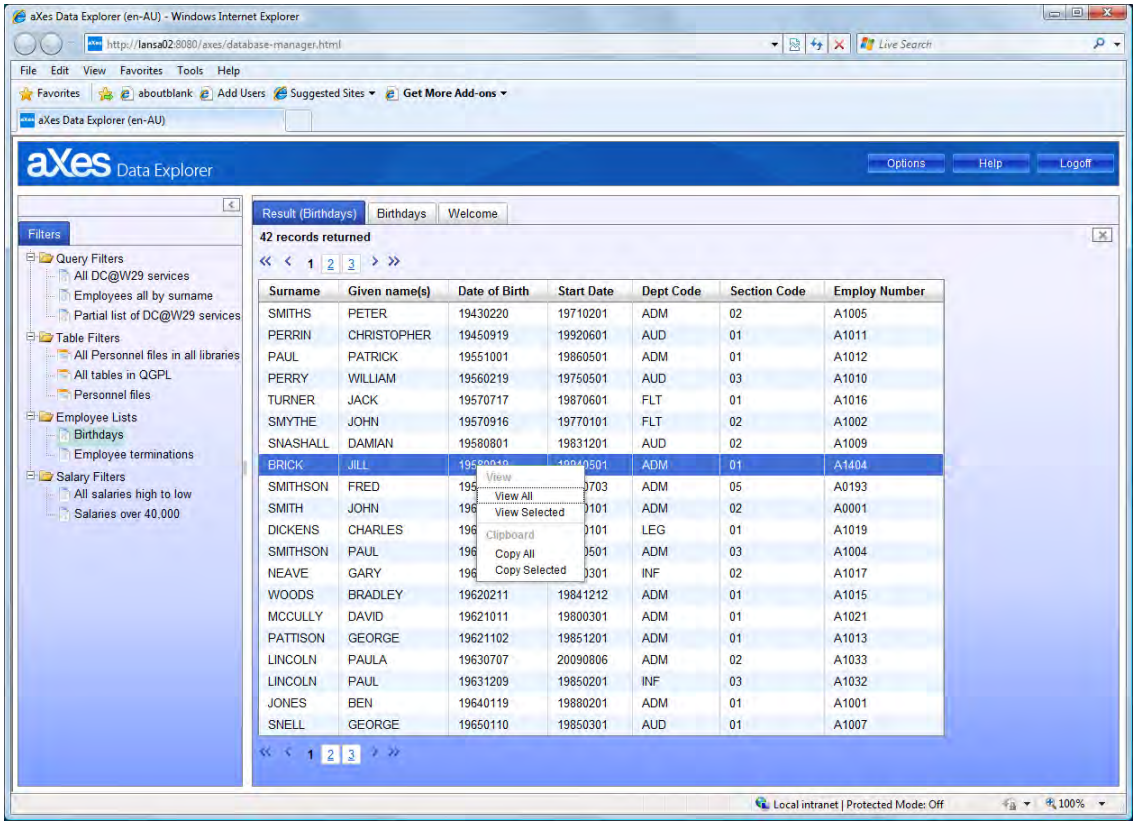
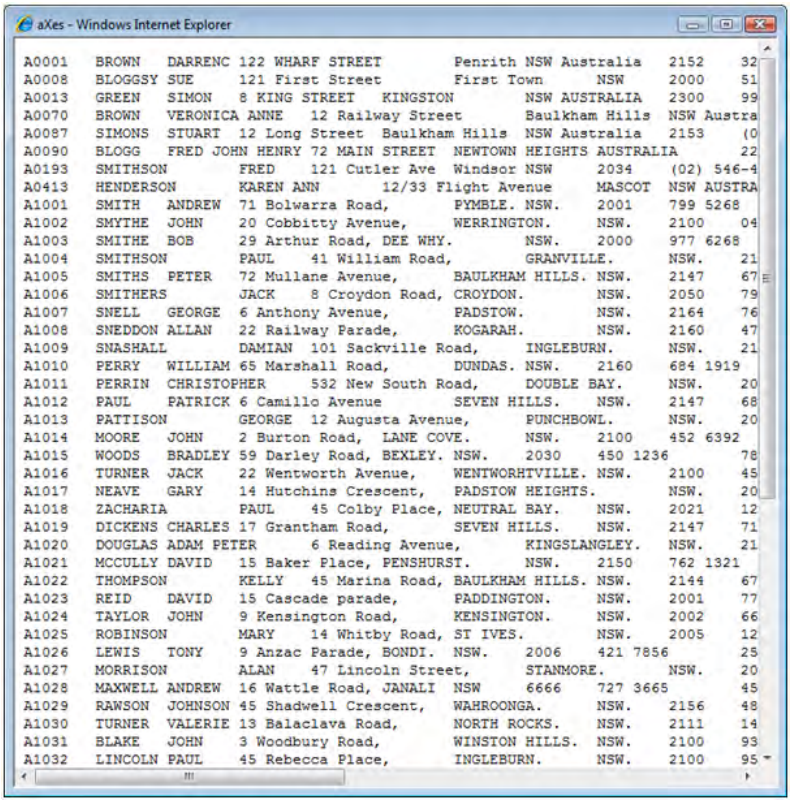


Surname	Given name(s)	Date of Birth	Start Date	Dept Code	Section Code	Employ Number
SMITHS	PETER	19430220	19710201	ADM	02	A1005
PERRIN	CHRISTOPHER	19450919	19920601	AUD	01	A1011
PAUL	PATRICK	19551001	19860501	ADM	01	A1012
PERRY	WILLIAM	19560219	19750501	AUD	03	A1010
TURNER	JACK	19570717	19870601	FLT	01	A1016
SMYTHE	JOHN	19570916	19770101	FLT	02	A1002
SNASHALL	DAMIAN	19580801	19831201	AUD	02	A1009
BRICK	JILL	[illegible]	[illegible]	ADM	01	A1404
SMITHSON	FRED	[illegible]	[illegible]	ADM	05	A0193
SMITH	JOHN	[illegible]	[illegible]	ADM	02	A0001
DICKENS	CHARLES	[illegible]	[illegible]	LEG	01	A1019
SMITHSON	PAUL	[illegible]	[illegible]	ADM	03	A1004
NEAVE	GARY	[illegible]	[illegible]	INF	02	A1017
WOODS	BRADLEY	19620211	19841212	ADM	01	A1015
MCCULLY	DAVID	19621011	19800301	ADM	01	A1021
PATTISON	GEORGE	19621102	19851201	ADM	01	A1013
LINCOLN	PAULA	19630707	20090806	ADM	02	A1033
LINCOLN	PAUL	19631209	19850201	INF	03	A1032
JONES	BEN	19640119	19880201	ADM	01	A1001
SNELL	GEORGE	19650110	19850301	AUD	01	A1007

Figure 2: Options for Viewing and Copying the Query Data

Clicking the View All or View Selected items from the floating menu opens a new window to show the query data displayed as text.




```
A0001   BROWN   DARRENC 122 WHARF STREET        Penrith NSW Australia   2152    32
A0008   BLOGGSY SUE     121 First Street        First Town      NSW     2000    51
A0013   GREEN   SIMON   8 KING STREET   KINGSTON        NSW AUSTRALIA   2300    99
A0070   BROWN   VERONICA ANNE   12 Railway Street       Baulkham Hills  NSW Austra
A0087   SIMONS  STUART  12 Long Street  Baulkham Hills  NSW Australia   2153    (0
A0090   BLOGG   FRED JOHN HENRY 72 MAIN STREET  NEWTOWN HEIGHTS AUSTRALIA       22
A0193   SMITHSON        FRED    121 Cutler Ave  Windsor NSW     2034    (02) 546-4
A0413   HENDERSON       KAREN ANN       12/33 Flight Avenue     MASCOT  NSW AUSTRA
A1001   SMITH   ANDREW 71 Bolwarra Road,       PYMBLE. NSW.    2001    799 5268
A1002   SMYTHE  JOHN    20 Cobbitty Avenue,     WERRINGTON.     NSW.    2100    04
A1003   SMITHE  BOB     29 Arthur Road, DEE WHY.        NSW.    2000    977 6268
A1004   SMITHSON        PAUL    41 William Road,        GRANVILLE.      NSW.    21
A1005   SMITHS  PETER   72 Mullane Avenue,      BAULKHAM HILLS. NSW.    2147    67
A1006   SMITHERS        JACK    8 Croydon Road, CROYDON.        NSW.    2050    79
A1007   SNELL   GEORGE  6 Anthony Avenue,       PADSTOW.        NSW.    2164    76
A1008   SNEDDON ALLAN   22 Railway Parade,      KOGARAH.        NSW.    2160    47
A1009   SNASHALL        DAMIAN  101 Sackville Road,     INGLEBURN.      NSW.    21
A1010   PERRY   WILLIAM 65 Marshall Road,       DUNDAS. NSW.    2160    684 1919
A1011   PERRIN  CHRISTOPHER     532 New South Road,     DOUBLE BAY.     NSW.    20
A1012   PAUL    PATRICK 6 Camillo Avenue        SEVEN HILLS.    NSW.    2147    68
A1013   PATTISON        GEORGE  12 Augusta Avenue,      PUNCHBOWL.      NSW.    20
A1014   MOORE   JOHN    2 Burton Road,  LANE COVE.      NSW.    2100    452 6392
A1015   WOODS   BRADLEY 59 Darley Road, BEXLEY. NSW.   2030    450 1236        78
A1016   TURNER  JACK    22 Wentworth Avenue,    WENTWORHTVILLE. NSW.    2100    45
A1017   NEAVE   GARY    14 Hutchins Crescent,   PADSTOW HEIGHTS.        NSW.    20
A1018   ZACHARIA        PAUL    45 Colby Place, NEUTRAL BAY.    NSW.    2021    12
A1019   DICKENS CHARLES 17 Grantham Road,       SEVEN HILLS.    NSW.    2147    71
A1020   DOUGLAS ADAM PETER      6 Reading Avenue,       KINGSLANGLEY.   NSW.    21
A1021   MCCULLY DAVID   15 Baker Place, PENSHURST.      NSW.    2150    762 1321
A1022   THOMPSON        KELLY   45 Marina Road, BAULKHAM HILLS. NSW.    2144    67
A1023   REID    DAVID   15 Cascade parade,       PADDINGTON.     NSW.    2001    77
A1024   TAYLOR  JOHN    9 Kensington Road,      KENSINGTON.     NSW.    2002    66
A1025   ROBINSON        MARY    14 Whitby Road, ST IVES.        NSW.    2005    12
A1026   LEWIS   TONY    9 Anzac Parade, BONDI.  NSW.    2006    421 7856        25
A1027   MORRISON        ALAN    47 Lincoln Street,      STANMORE.       NSW.    20
A1028   MAXWELL ANDREW  16 Wattle Road, JANALI  NSW     6666    727 3665        45
A1029   RAWSON  JOHNSON 45 Shadwell Crescent,   WAHROONGA.      NSW.    2156    48
A1030   TURNER  VALERIE 13 Balaclava Road,      NORTH ROCKS.    NSW.    2111    14
A1031   BLAKE   JOHN    3 Woodbury Road,        WINSTON HILLS.  NSW.    2100    93
A1032   LINCOLN PAUL    45 Rebecca Place,       INGLEBURN.      NSW.    2100    95
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Figure 3: View Query Data as Text (tab separated format)

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Questions and answers

Getting started

Table 1 (page 5) contains questions and answers about what you need to get started with DE.

Table 1: Questions and Answers about Getting Started

Questions	Answers
Do I need a user identification and/or password to use DE?	Yes. You need a user identification and a password.
Does DE install anything on my computer?	No.
Do I need to install software on my computer?	No. You need one of the supported browsers.
What browsers can I use?	Chrome, Firefox, Internet Explorer and Safari (see the aXes supported platforms document obtainable from www.axeslive.com)

Filters

Table 2 (page 5) contains questions and answers about all types of filters.

Table 2: Questions and Answers about All Types of Filters

Questions	Answers
Can I edit the name of the start-up filter on the Options tab?	No. You set the start-up filter from the filter itself. There is no need to edit the filter name on the Options tab.
Can I save filters?	You save filters in folders. Use the default folders or create your own folders.
Do I need to save a filter to run the filter?	No. You can create a filter and use it as one task. If you do not want to keep the filter, close the edit tab without saving the filter.
How do I close a tab?	Press the close icon ☒ on the tab.
How do I stop a filter running when DE starts?	Press the Clear Startup Filter button on the Options tab.
I do not want to run any filters when DE starts.	Press the Clear Startup Filter button on the Options tab.
What is a query filter?	Query filters contain the SQL for the selection criteria and filter properties needed to run queries.

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Questions	Answers
What is a table filter?	Table filters contain the search criteria and properties needed to search for files to use in query filters.
Why run a filter when DE starts?	When you need the same or similar information regularly, running the filter automatically when DE starts means the results will be available immediately. This saves you the effort of choosing and running a filter.
Why are there two types of filters?	Query filters examine the data in tables and retrieve the rows that match the selection criteria defined in the query filter. Table filters allow you to search for the tables that you want to use in a query filter. The search result returned by a table filter is a list of tables. Table filters do not retrieve the data from the tables.

The questions and answers in Table 2 (page 5) apply to all types of filters. The following sections include questions and answers specific to query filters and table filters.

Query filters

Queries retrieve data from database tables using SQL. Query filters provide tools to build the queries and the SQL defines the data selection criteria for the query.

Table 3 (page 6) contains questions and answers about query filters.

Table 3: Query Filter Questions and Answers

Questions	Answers
Do I need to know SQL?	You do not need to know SQL to build simple query filters. DE will help you to construct the SQL for SELECT query filters. You should understand SQL if you want to build queries including SQL clauses like WHERE and LIKE. You need to know SQL if you want to build more complex queries that join tables.
Do I need to save a query filter to run the query?	No. You can create a query filter, run the query, and view the query data as one task. You can amend the SQL and run the query as many times as you wish. If you do not want to keep the query filter, close the edit tab.

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Questions	Answers
Why does DE allow only SELECT queries?	SQL is a powerful tool allowing you to manipulate data in tables and the tables themselves. The SELECT clause provides only data retrieval (read only) and does not manipulate the data in the table. DE is designed as query tool and is not a general purpose SQL editor. Therefore, SQL statements that manipulate tables or data are inappropriate. The safest way to run database queries in a browser is to use a read-only mode for access to the tables (the SELECT clause).

Table filters

Table 4 (page 7) contains questions and answers about table filters.

Table 4: Table Filter Questions and Answers

Questions	Answers
Do I need to save a table filter to search for tables?	No. You can create a table filter, perform the search, and select a table from the search results as one task. If you do not want to keep the table filter, close the result tab.
Can I search for tables with the same name in multiple libraries?	Yes. Set the search criteria as the table name and use the percentage (%) character as the library name.
Can I search for all tables in a specific library?	Yes. Set the search criteria as the library name and use the percentage (%) character as the table name.

Folders

Table 5 (page 7) contains questions and answers about folders.

Table 5: Folder Questions and Answers

Questions	Answers
Can I save all filters in one folder?	Yes. However, finding filters will become more difficult as your collection of filters grows. You will need precise conventions for naming your filters. The alternative is to create additional folders.
Can I undelete folders?	No. Deleting a folder removes both the folder and the filters saved in the folder. DE provides no undelete method.

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Questions	Answers
Can I move a folder?	No. The folder title determines the position of the folder in the folder structure. DE sorts folders alphabetically by the folder title.
Is there a limit to the number of folders?	DE imposes no limit to the number of folders.
What happens to the filters in a folder when I delete the folder?	Deleting a folder deletes all filters saved in the folder and the folder itself. If you want to delete a folder but retain the filters, move the filter(s) to another folder before deleting the folder.
What is the maximum number of characters allowed in folder titles?	Eighty (80) characters, including spaces.

Query data

Query data is the data retrieved from tables by query filters.

Table 6 (page 8) contains questions and answers about query data.

Table 6: Query Data Questions and Answers

Questions	Answers
Can I keep the content of multiple queries open simultaneously?	Yes. DE opens a new results tab each time you display query data. You can leave the tabs open while you perform other table searches or run query filters. It is your responsibility to close the open tabs.
Can I copy query data?	Yes. Select the text in the view query data window copy the selected text (hold Ctrl and press C), then paste the query data into another application.
Can I copy query data to the clipboard?	Yes. DE provides a menu option for copying query data to the clipboard. You can paste the query data into another application from the clipboard (Microsoft Excel is an example). The other application must be capable of using the clipboard.

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Appendices

Glossary

Table 7 presents definitions for abbreviations and terms used in this guide.

Table 7: Glossary of Abbreviations and Terms

Abbreviations and Terms	Definitions and Explanations
Data selection criteria	The term "data selection criteria" refers to the SQL defined in a query filter.
DE	aXes Data Explorer
Files	IBM i servers to refer to data residing on disks as physical files. SQL uses the word table.
Filter	DE uses the word "filter" to describe a collection of search criteria when searching for tables and selection criteria for queries.
Queries	Queries describe the selection criteria inherent in SQL statements.
Query data	Query data refers to data sets produced by running query filters. A data set contains data that matches the selection criteria specified in the query filter. The query data consists of data retrieved from database tables.
Search criteria	The search criteria determine what DE looks for when searching for tables. Suppose you want a list of tables in the QGPL library, the search criteria is a specific library and any table. You express the search criteria as library "QGPL" and table name like "Q%" (to find tables in QGPL whose names begin with the letter Q.)
Selection criteria	The selection criteria determine the rules used by queries when retrieving data from tables. DE uses SQL to express the selection criteria.
SQL	Structured Query Language (SQL) is the language used to interrogate relational databases. An example of an SQL query is: SELECT surname, first_name, start_date, annual_salary FROM employees WHERE annual_salary < 50000 ORDER BY start_date This SQL selects employees whose annual salary is less than $50,000 and sequences the query data by the date the employee started with the company. The query data consists of surname, first name, start date and annual salary.
SQL clause	SQL clauses are elements in an SQL statement. Examples are SELECT, FROM, WHERE and ORDER BY.

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Abbreviations and Terms	Definitions and Explanations
SQL statement	SQL statements refer to the whole set of SQL used for query filters. SELECT * FROM axdemolib/employees is an example of an SQL statement.
Table	IBM i servers to refer to data residing on disks as physical files. SQL uses the word table.

Assumed and prerequisite knowledge

Table 8 defines the prerequisite knowledge needed to use DE.

Table 8: Assumed and Prerequisite Knowledge

Subject Matter	Explanations
Libraries	The documentation assumes that you understand the concepts behind libraries for IBM i servers.
Query concepts	The documentation assumes that you understand the concepts behind querying tables in databases on IBM i servers.
SQL	The documentation assumes that you understand how to create SQL, especially for cases when you need complex SQL (examples are joining tables and complicated WHERE clauses).
Tables and files	The documentation assumes that you understand the concepts behind tables (or files) on IBM i servers, including physical files, logical files and views.
Using the clipboard	You need to know how to use the clipboard for copying and pasting data between applications.

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