

Part 5.

System i Access for Web: Database Access



Abstract

This session focuses on how easy it is to access DB2 for i5/OS from the Web. It will cover the System i Access for Web options available to upload PC data to the i5/OS database and to download database information to a PC user.

In this session, attendees will learn how to:

- 1. Use the SQL Wizard to build and save SELECT statements**
- 2. Work with advanced output options, such as file types, HTML options, and lists.**
- 3. Upload data to DB2 for i5/OS using the browser**
- 4. Run static and dynamic queries**
- 5. Extract select information about i5/OS objects and resources.**
- 6. Import SQL statements created with DB2 Query Manager (5722-ST1) and IBM Query for System i (5722-QU1) into System i Access for Web**

System i Access for Web – Database Functions

Access database tables on your iSeries server with iSeries Access for Web.

Tables

- View a list of database tables on your iSeries server.
- Perform actions on these tables without having knowledge of SQL and its syntax.
- View the contents of a table in a paged list, using the Quick view action.
- Add and update records in a table using the Insert and Update actions.
- Create your own customized SQL request for a table using the Run SQL action.
- Create your own customized copy data request for a table using the Copy data to table action.

My requests

- View a list of previously saved requests.
- Run or Edit requests from this list.
- Manage lists using the Copy, Delete, and Rename actions
- Create and manage shortcuts to requests

Run SQL

- Run SQL statements dynamically.
- View output as a paged list or in a popular file format, like Microsoft Excel or Lotus 1-2-3. (Output format depends on how you have your browser configured and whether the browser can locate a plug-in for the output type you choose.)
- Customize how data is returned by setting options specific to the output type.
- Build SELECT statements using an SQL Wizard.
- Save requests for repeated use.

Copy data to table

- Copy existing data files from your PC to a database table on your iSeries server.
- These data files can be in many popular file formats, including Microsoft Excel and Lotus 1-2-3.
- Replace the contents of a table or add data to an existing table.
- Create a new database table based on the contents of a workstation file.
- Save requests for repeated use.

Import request

- Import Client Access Data Transfer upload and download requests into iSeries Access for Web copy data and SQL requests.
- Imported requests are automatically converted to iSeries Access for Web format.
- Run and edit converted requests on your iSeries server just like other copy data and SQL requests.

Import query

- Import queries generated by Query for iSeries and DB2 UDB for iSeries Query Manager.
- Imported queries can be saved into iSeries Access for Web database requests.
- Run and edit converted queries on your iSeries server just like iSeries Access for Web SQL requests.

Extract server data

- Extract server object information into a database table.

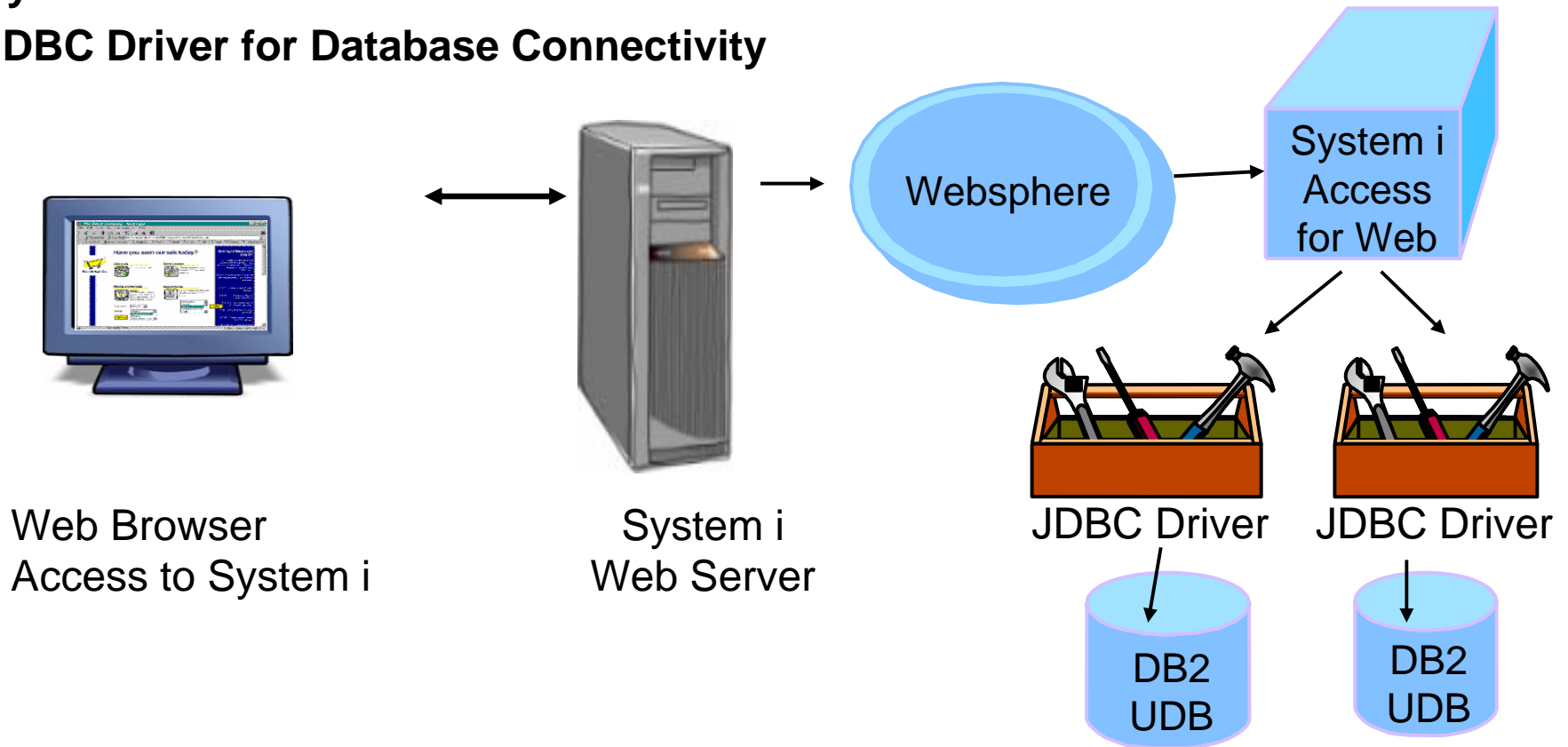
Security and Administration



Database Overview

System i Access for Web

System I Access for Web uses the JDBC Driver for Database Connectivity



Security – Access to DB2 for i5/OS

All database requests in System i Access for Web, System i Access for Windows, and System i Access for Linux flow through the System i Access Database Server

All objects on the server, including SQL objects, are **managed by the system security** function

- Most IBM SQL operations go through the iSeries Database DB Host Server and use the QIBM_QZDA server exit point.
- This includes Data Transfer, ODBC, .NET, parts of OLE DB, and some functions of the Toolbox (JDBC including Access for Web).
- See: <http://publib.boulder.ibm.com/iserie/s/v5r2/ic2924/index.htm?info/sqlp/rb/afymst324.htm>

System i Access Database Server

- I5/OS Object Level Security
- Exit Programs



Exit Programs

- Exit programs written for the QIBM_QZDA NDB, ROI, and SQL exit points may help to **restrict certain users from accessing** specific files.
- Configured with WRKREGINF on i5/OS
- Given the SQL statement sent from the client application. Statements may be rejected by the user exit program
- May be written in a variety of host languages

Policies

- **Control Access to Database functions by restricting access to System i Access for Web functions.**
- **Restrict by specific user, groups of users, all users**
- **Requires *SECADM authority to use**
 - **a non-SECADM user can be granted the rights to administer System i Access for Web**

iSeries Access for Web

Policies

Profile: CMINER

Action	Category	Description	Access
	5250	5250 user interface custom settings.	Allowed
	Command	Run batch command custom settings.	Allowed
	Customize	Preferences and policy administration custom settings.	Allowed
	Database	Database tables, requests, and run SQL custom settings.	Allowed
	Database connections	Create and edit database connection definitions.	Allowed
	Download	Download packages custom settings.	Allowed
	Files	Integrated file system and file share custom settings.	Allowed
	General	Page layout, language and character set custom settings.	Allowed
	Jobs	Work with jobs custom settings.	Allowed
	Mail	Send mail custom settings.	Allowed
	Messages	Display messages, send messages, and message queue custom settings.	Allowed
	My Folder	My Folder custom settings.	Allowed
	Print	Printer output, printers, printer shares and output queue custom settings.	Allowed
	Sametime	Lotus Sametime custom settings.	Allowed
	Other	Change password and other miscellaneous custom settings.	Allowed

Related Links:

- iSeries Access for Web
- iSeries Access
- iSeries Navigator
- iSeries Information Center
- iSeries Resource

All the Policies that can be set for 'Database' functions

Edit Policies - Database

Profile: CMINER

Policy	Derived From ?	Action ?	Setting
Database access	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	
Database tab	Shipped default	Use current setting <input type="button" value="v"/> Show <input type="button" value="v"/>	
Tables	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	
Maximum table rows	Shipped default	Use current setting <input type="button" value="v"/> 500 <input type="button" value="v"/>	
Table filter	Shipped default	Use current setting <input type="button" value="v"/> *USRLIBL	
Table filter is user preference	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	
Insert records into table	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	
Insert record columns	Shipped default	Use current setting <input type="button" value="v"/> Columns... <input type="button" value="v"/>	
Update records in table	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	
Update record columns	Shipped default	Use current setting <input type="button" value="v"/> Columns... <input type="button" value="v"/>	
Quick view table records	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	
Maximum quick view rows	Shipped default	Use current setting <input type="button" value="v"/> 1000 <input type="button" value="v"/>	
Order records by relative record number	Shipped default	Use current setting <input type="button" value="v"/> No <input type="button" value="v"/>	
Find records in table	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	

Requests	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	
Run request	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	
Copy request	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	
Delete request	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	
Rename request	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	
Edit request	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	
Save request	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	
List request shortcuts	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	
Create request shortcut	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	
Copy request shortcut	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	
Delete request shortcut	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	
Rename request shortcut	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	
Request list columns	Shipped default	Use current setting <input type="button" value="v"/> Columns... <input type="button" value="v"/>	
Run SQL requests	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	
Run statements other than query	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	
Copy data to table	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	
Create new tables	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	
Append data to tables	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	
Replace data in tables	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	
Import request	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	

shortcut	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	
Rename request shortcut	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	
Request list columns	Shipped default	Use current setting <input type="button" value="v"/> Columns... <input type="button" value="v"/>	
Run SQL requests	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	
Run statements other than query	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	
Copy data to table	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	
Create new tables	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	
Append data to tables	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	
Replace data in tables	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	
Import request	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	
Import query	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	
Extract server object data	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	
Default connection	Shipped default	Use current setting <input type="button" value="v"/> IBM Toolbox for Java - X1519P4.RCHLAND.IBM.COM <input type="button" value="v"/>	
Default connection is user preference	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	
Add IBM Toolbox for Java to connection list	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	

[Policies help](#)
 View help for editing policies.

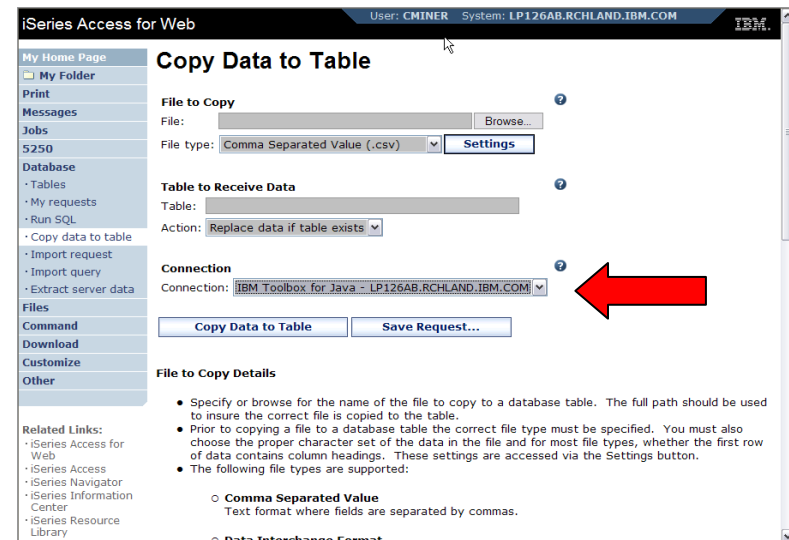
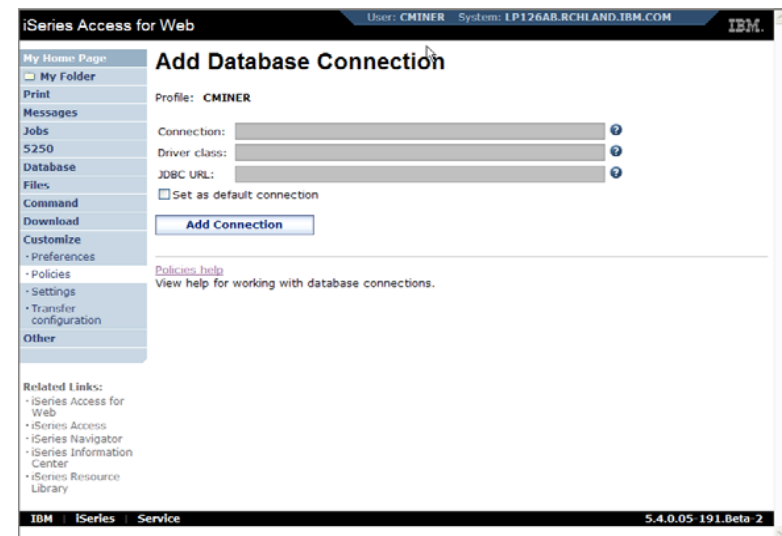


How to work with the database features

When using 'Database' functions

You can connect to multiple systems and databases with System i Access for Web

- Simply add other database connections to your list
 - Easiest way to do this is to copy the default one, then modify it and save it.
 - It will then appear as an option in the Connection pulldown
- Default is IBM Toolbox for Java and is for DB2 for i5/OS, but you could use other JDBC drivers to connect to other systems



Database – use WAS data sources (new in V5R4)

Servlet version

WAS data sources are pooled and managed by WAS and should scale better than our original database connections

Two types of connection definitions are supported:

- **Driver manager connections require a driver class and a JDBC URL**
 - **Specify the JDBC driver class name to use for this database connection, ie, the IBM Toolbox for Java JDBC Driver**
- **Data source connections require a data source name.**
 - **Specify the JNDI name of the data source to use for this connection. Must have a component-managed authentication alias set if it is used in a single sign-on environment.**



Data Source connections enable many different applications running under WebSphere to use the same data source connection

For the 'typical' end user



My Requests

Administrator creates queries or upload requests for end users to run.

- Selected Users are then given access to run these selected data requests
- They're only given access to run those necessary to perform their job



iSeries Access for Web

My Home Page
Print
5250
Database
• My requests
Files
Download

Related Links:
• iSeries Access for Web
• iSeries Access
• iSeries Navigator
• iSeries Information Center
• iSeries Resource Library

My Requests

« « « [1] » » »

Request	Description	Action	Shortcut	Created By	Access
Shortcut to Boats For Sale	View all available boats		Yes	CMINER	groupa
Shortcut to Find Boat To Buy	Select type and price limits		Yes	CMINER	*PUBLIC
Shortcut to My Customers Mailing	Mail Customer List		Yes	CMINER	groupa
Shortcut to My Customers Mailing	Mail Customer List		Yes	cminer	cminer1
Shortcut to Put My Customer List in Folder	Store Customer List		Yes	CMINER	groupa
Shortcut to request sql			Yes	secyesi	*PUBLIC
Shortcut to request upload			Yes	secyesi	*PUBLIC

« « « [1] » » »

These are called Shortcuts

Static Requests

Run a pre-built query or upload

- Example is a Query that is set up to display up to 500 entries

This query could be set up to:

- Be viewed in the browser
- Converted to a spreadsheet format, HTML, plain text....
- Converted to .PDF
- Saved in IFS or Personal Folder

iSeries Access for Web

User: CMINER System: LP120AB.RCHLAND.IBM.COM

My Home Page

My Folder

Print

Messages

Jobs

5250

Database

- Tables
- My requests
- Run SQL
- Copy data to table
- Import request
- Import query
- Extract server data

Files

Command

Download

Customize

Other

Related Links:

- iSeries Access for Web
- iSeries Access
- iSeries Navigator
- iSeries Information Center
- iSeries Resource Library

SQL Output

« « « [1] » » » Q

BCOST	BYEAR	BTYPE	BNAME	BFEET	BNT01
2975000	1996	P	Monterey Marine Custom	80	-Located in Stuart, FL
1588000	2005	P	Fairline Squadron	58	Motor yacht with flybridge, 3 staterooms, diesel
1000000	1979	C	Poole Boat Co Aluminum	80	-Located in S. Diego, CA
750000	1995	P	Spandau Houseboat	720	8 cabins, 12 berths, 4 toilets, Volvo MD 2040 engine
450000	1990	S	Merlin's Magic	54	-Designed by Dutch naval architect Ernst Van Derlaan.
450000	2000	A	Seacamper 795 Houseboat	72	2 cabins, 4 berths, 1 toilet, wheel-rudder steering, diesel fuel
269500	1989	S	Seafinn 411 Motorsailer Ketch	41	-Silver anodised spars by Selden of Sweden. Main and
249000	1944	T	Miki Miki Original Tug	126	-Located in Seattle, WA.
185000	2000	P	Baveria 50 Yacht	50	5 cabins, 3 showers, Volvo TMD22 78PS engine
179500	1993	S	Fontaine Pajot Antigua	37	-Fiberglass hull and deck with a vacuum bagged core.
179000	1989	S	Nauticat 40	40	-All hand laminated fiberglass construct layers of mat
159900	1981	S	Shannon 50 ketch	50	-Walter Shulz design ketch built by Shannon Boat Co. Inc.
149000	1985	S	Brandlmayr 48	48	-An 8" aluminum extrusion, oval mast and 3/8" galvanized
80000	1974	S	Garden Design Porpoise Ketch	51	-The hull is carvel planked teak.
69950	1994	S	Corsair 27	27	-Fouinped for cruising and racing

Dynamic Query

Example has conditions the end user can set:

1. Type of boat (Power, Sailing, etc)
2. Price limits (lower / upper)

iSeries Access for Web

My Home Page
My Folder
Print
Messages
Jobs
5250
Database
• Tables
• My requests
• Run SQL

Find Boat

Select Boat Type

P ▼

A in US\$ greater than or equal to: 20000

C

P in US\$ less than or equal to: 500000

S

T

OK Cancel

Query brings back only database entries meeting conditions

iSeries Access for Web

My Home Page
My Folder
Print
Messages
Jobs
5250
Database
• Tables
• My requests

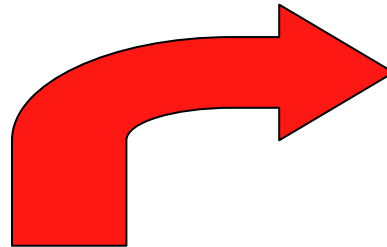
SQL Output

« « [1] » »

BCOST	BYEAR	BTYPE	BNAME	BFEET	BNT01
23900	1978	P	Carver Santa Cruz	28	-Constructed of fiberglass.
55000	1985	P	Monk Flybridge/Sedan	34	-Double planked cedar on oak frames.
185000	2000	P	Baveria 50 Yacht	50	5 cabins, 3 showers, Volvo TMD22 78PS engine

« « [1] » »

Upload PC data to DB2 for i5/OS



Copying Data to DB2 for i5/OS

Copy data to table function allows you to copy PC data into a DB2 for i5/OS table

Specify:

- File name
- File type
- File settings
- Table name
- Replace or append records to table
- Connection

Copy Data to Table

File to Copy

File: Browse...

File type: Comma Separated Value (.csv) Settings

Table to Receive Data

Table:

Action: Replace data if table exists

Connection

Connection: IBM Toolbox for Java - LP126AB.RCHLAND.IBM.COM

File to Copy Details

- Specify or browse for the name of the file to copy to a database table. The full path should be used to insure the correct file is copied to the table.
- Prior to copying a file to a database table the correct file type must be specified. You must also choose the proper character set of the data in the file and for most file types, whether the first row of data contains column headings. These settings are accessed via the Settings button.
- The following file types are supported:
 - Comma Separated Value**
Text format where fields are separated by commas.
 - Data Interchange Format**

Creating a new table

Copy data to table will create a new table if one does not exist

Choose to view or change the table definition

or

To simply create the table using the default definition determined by System i Access for Web

iSeries Access for Web User: CMINER System: LP126AB.RCHLAND.IBM.COM

Copy Data to Table

Table BOATS.DATA does not exist.

Create options

View or change column definitions before creating table

Create table using the source file's column definitions

OK Cancel

Create Options Details

- View or change column definitions before creating table**
 - This is the recommended option. You can verify or make modifications to the table's column definitions before creating the table.
 - If the file to copy does not contain column headings, the default column headings (F1, F2, F3, ... Fn, where n is the number of columns in the file to copy) can be changed to something more descriptive.
 - You can choose more appropriate data types for fields. For example, using VARCHAR instead of CHAR or FLOAT instead of NUMERIC.
 - CHAR and NUMERIC columns can also be lengthened to support larger data.
- Create table using the source file's column definitions**
 - A default table is created and the file data is copied into it.
 - If the file does not contain column headings, default column headings (F1, F2, F3, ... Fn, where n is the number of columns in the file to copy) are used.
 - The table is created with minimum column lengths to contain the file data.
 - Default data types are used for table columns.

Creating a new table

Verify Column Definitions for A New Table

From this panel you may add a description, change data types, column length, and scale

Click Create Table to create the new table and copy your data to the new table

iSeries Access for Web User: CMINER System: LP126AB.RCHLAND.IBM.COM

Table Column Definitions

Verifying column definitions before creating the table is recommended. You can change any of the column definition attributes before clicking Create Table.

Column	Description	Type	Length	Scale	Sample Data
BTYPE		CHAR	1	0	P
BNAME		CHAR	29	0	Bavaria 50 Yacht
BFEET		FLOAT	0	0	50.0
BYEAR		FLOAT	0	0	2000.0
BCOST		FLOAT	0	0	185000.0
BNT01		CHAR	71	0	5 cabins, 3 showers, Volvo TMD22 78PS engine
BNT02		CHAR	66	0	
BNT03		CHAR	68	0	
BNT04		CHAR	64	0	
BNT05		CHAR	69	0	
BNT06		CHAR	72	0	
BNT07		CHAR	72	0	
BNT08		CHAR	70	0	
BNT09		CHAR	70	0	
BNT10		CHAR	63	0	

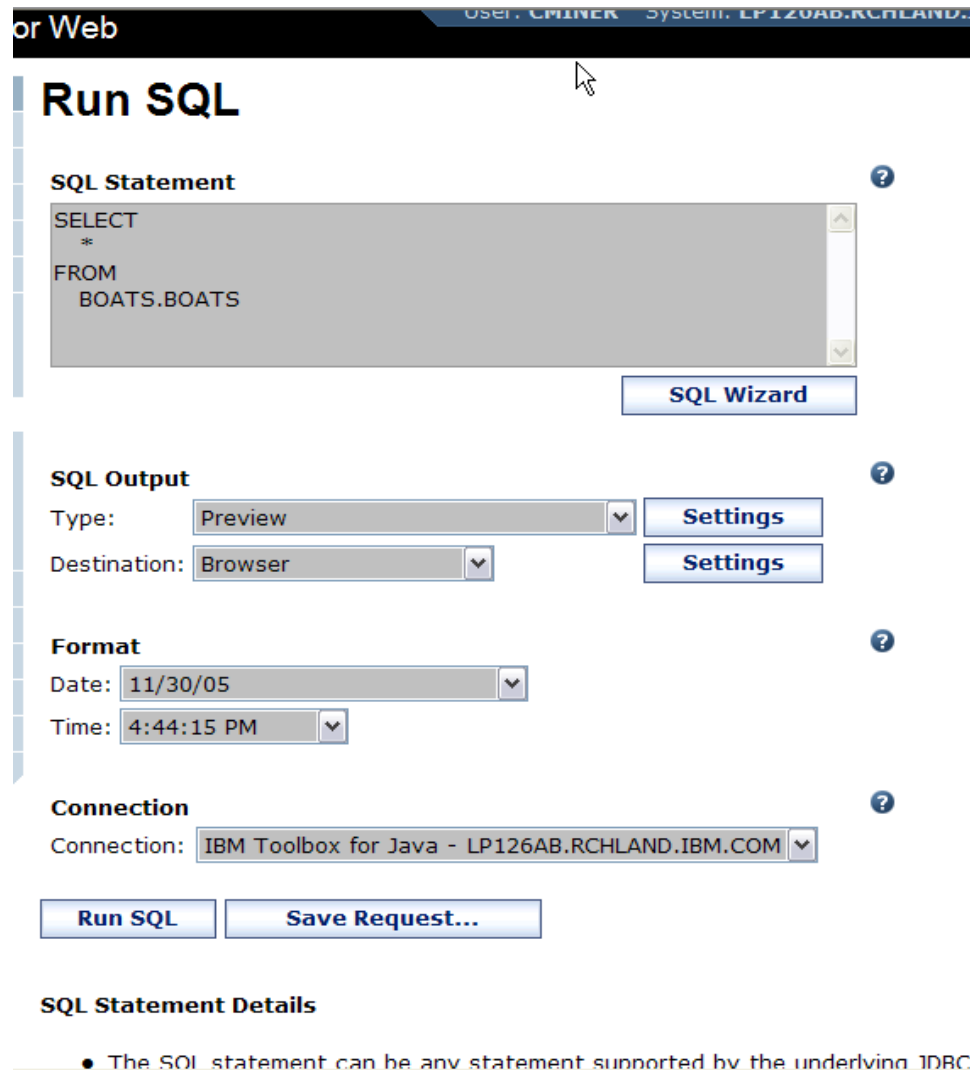
Query DB2 for i5/OS



Run SQL

The Run SQL function allows you to type in a free-form SQL Statement

- If you do not know SQL, then use the SQL Wizard to help you generate an SQL SELECT statement
- Select from a variety of output formats, including:
 - Preview
 - PDF
 - .XLS (Excel)
 - XML
 - HTML
 - ...



or Web

User: CMINER System: LP126AB.RCHLAND.IBM.COM

Run SQL

SQL Statement

```
SELECT
*
FROM
BOATS.BOATS
```

SQL Wizard

SQL Output

Type: Preview Settings

Destination: Browser Settings

Format

Date: 11/30/05

Time: 4:44:15 PM

Connection

Connection: IBM Toolbox for Java - LP126AB.RCHLAND.IBM.COM

Run SQL Save Request...

SQL Statement Details

- The SQL statement can be any statement supported by the underlying JDBC.

The SQL Wizard

The SQL Wizard helps you generate a single table SELECT statement

The screenshot shows the 'iSeries Access for Web' interface. The browser title bar indicates 'User: CRINKER System: LP120AD'. The main content area is titled 'SQL Wizard' and displays the following SQL statement:

```
SELECT
*
FROM
BOATS.BOATS
```

Below the SQL statement is a toolbar with icons for help, table view, grid view, refresh, save, and undo. The 'Welcome' section contains the text: 'This wizard steps you through creating an SQL select statement.' At the bottom, there are three buttons: 'Next', 'Finish', and 'Cancel'. A left-hand navigation menu is visible, listing options such as 'My Home Page', 'My Folder', 'Print', 'Messages', 'Jobs', '5250', 'Database', 'Files', 'Command', 'Download', 'Customize', and 'Other'.

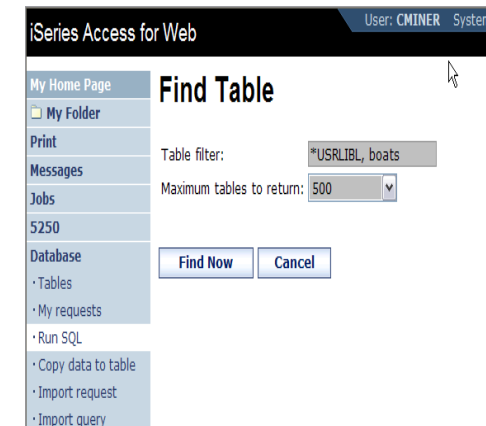
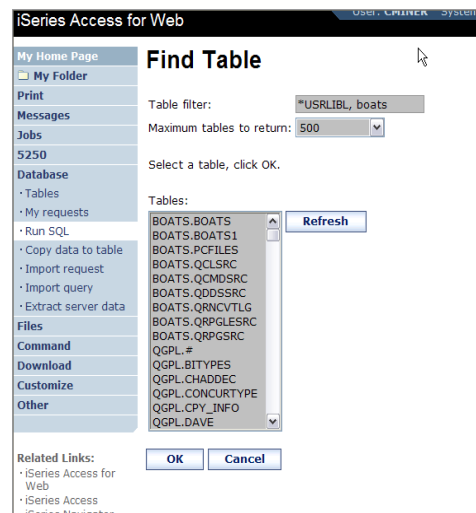
Identify the DB2 for i5/OS database table

Step 1:

Choose a table

Type in a **table filter** to help narrow your search. Many schemas (libraries) may be specified by putting them in a comma separated list

Select a table and click OK to use it to generate the SELECT statement



Select your Output Columns

Step 2:

Choose columns

- Check the boxes next to the columns to include them in the statement
 - If you check none, you get all columns
- Click the column order button to change the order output
 - Changed Price from 50 to 05 so it would be first

SQL Wizard

SELECT *
FROM "BOATS"."BOATS"

Columns

Select which columns to include. If no columns are selected, all columns are included.

Column	Description	Heading
<input checked="" type="checkbox"/> BTYPE	P=Powered S=Sailing	Column name
<input checked="" type="checkbox"/> BNAME	boat name	Column name
<input checked="" type="checkbox"/> BFEET	Length in feet	Column name
<input checked="" type="checkbox"/> BYEAR	Year built	Column name
<input checked="" type="checkbox"/> BCOST	Price in US\$	Column name
<input type="checkbox"/> BNT01	Note 1	Column name
<input type="checkbox"/> BNT02	Note 2	Column name
<input type="checkbox"/> BNT03	Note 3	Column name
<input type="checkbox"/> BNT04	Note 4	Column name
<input type="checkbox"/> BNT05	Note 5	Column name
<input type="checkbox"/> BNT06	Note 6	Column name
<input type="checkbox"/> BNT07	Note 7	Column name
<input type="checkbox"/> BNT08	Note 8	Column name

iSeries Access for Web

Column Order

To change the order in which columns are included, change the order values. Columns with smaller order values will be included before columns with larger order values.

Order	Column	Description
10	BTYPE	P=Powered S=Sailing
20	BNAME	boat name
30	BFEET	Length in feet
40	BYEAR	Year built
05	BCOST	Price in US\$

OK Cancel

Specify Conditions

Step 3:

Adding conditions

- Conditions allow you to select records that meet certain criteria.
- Click Add New Condition to specify a condition.
- Select the column to use in the condition and click Next

SQL Wizard

```
SELECT
  "BCOST", "BTYPE", "BNAME", "BFEET", "BYEAR"
FROM
  "BOATS"."BOATS"
```

Condition

To add a condition, click Add New Condition. To continue, click Next.

[Add New Condition](#)

[Back](#) [Next](#) [Finish](#) [Cancel](#)

Condition Column

Select a column.

Column	Type	Description
<input type="radio"/> BTYPE	CHAR(1)	P=Powered S=Sailing
<input type="radio"/> BNAME	CHAR(30)	boat name
<input type="radio"/> BFEET	NUMERIC(3)	Length in feet
<input type="radio"/> BYEAR	NUMERIC(4)	Year built
<input checked="" type="radio"/> BCOST	NUMERIC(9)	Price in US\$
<input type="radio"/> BNT01	CHAR(72)	Note 1
<input type="radio"/> BNT02	CHAR(72)	Note 2
<input type="radio"/> BNT03	CHAR(72)	Note 3

Choose the operator type

- The SQL wizard allows you to choose the operator to use in the condition
- The condition shows up both in the SQL and in a condition list. You may edit or delete the condition.
- You may also add additional conditions.

iSeries Access for Web User: CMINER Sys

Condition Operator

Column: BCOST NUMERIC(9) Price in US\$

Column > [Operator]

Select an operator.

Exactly equal to Between

Not equal to Not between

Greater than Null

Greater than or equal to Not null

Less than

Less than or equal to

Choose static versus dynamic

- The SQL wizard allows you to choose if the condition value is specified in the request, or is prompted for when the request is run.
- Static or Dynamic

The screenshot shows the 'iSeries Access for Web' interface. The title bar indicates the user is 'CMHNLK' on 'SYSTEM1.LP120AD.RCHERLAND.IBM.COM'. The main content area is titled 'Condition Value Option'. It displays the following information:

- Column: BCOST NUMERIC(9) Price in US\$
- Operator: Less than
- Navigation: [Column](#) > [Operator](#) > [Value option]
- Instruction: Select how the condition value is specified.
- Option 1: **Specify condition value now**
The user is not prompted for input when the request is run. The SQL Wizard displays a page to enter the condition value.
- Option 2: **Prompt for condition value when request is run**
The user is prompted for the condition value when the request is run. The SQL Wizard displays pages to specify how the condition prompt is displayed.

At the bottom, there are four buttons: Back, Next, Apply, and Cancel.

Specifying a Static Value

The SQL wizard allows you to specify the value for the condition.

- The value can be:
- Constant or
 - Other specific function

Can find values in table

The statement is complete!

- The statement is now complete.
- Click the Finish button (not shown) on the bottom of the SQL Wizard page to return to Run SQL
- The SELECT statement you generated is available for use in Run SQL

SQL Wizard

```
SELECT
  "BCOST", "BTYPE", "BNAME", "BFEET", "BYEAR"
FROM
  "BOATS"."BOATS"
WHERE
  ( ("BCOST" < 1000000) )
```

Sort

Select which columns to use when sorting the data. If no columns are selected, data is returned in the order it was inserted.

Column	Description	Direction
<input type="checkbox"/> BTYPE	P=Powered S=Sailing	Ascending
<input type="checkbox"/> BNAME	boat name	Ascending
<input type="checkbox"/> BFEET	Length in feet	Ascending
<input type="checkbox"/> BYEAR	Year built	Ascending
<input checked="" type="checkbox"/> BCOST	Price in US\$	Descending
<input type="checkbox"/> BNT01	Note 1	Ascending

Run SQL

SQL Statement

```
SELECT
  "BCOST", "BTYPE", "BNAME", "BFEET", "BYEAR"
FROM
  "BOATS"."BOATS"
WHERE
  ( ("BCOST" < 1000000) )
```

SQL Output

Type:

Destination:

Format

Date:

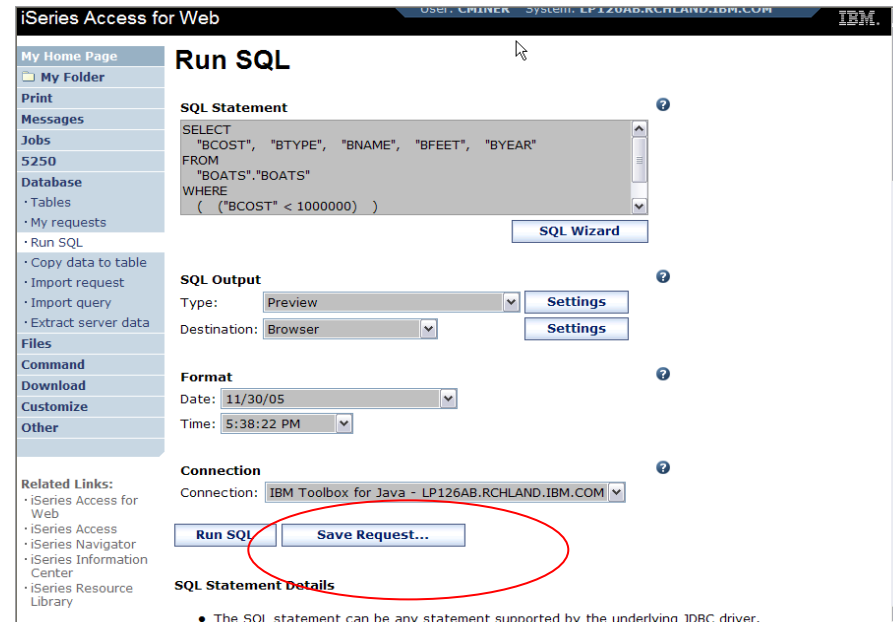
Time:

Connection

Connection:

Save the SQL Request

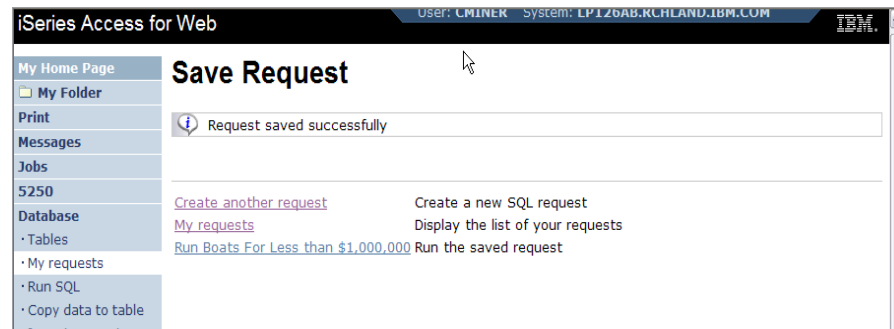
After creating a statement (by hand or with the SQL Wizard) you have the option to save it later use



Can Run it now

Or

Run it later from "My Requests"



Dynamic Query – condition value

Select to prompt for values when the request is run

The screenshot shows the 'iSeries Access for Web' interface. On the left is a navigation menu with categories like 'My Home Page', 'Database', 'Files', 'Command', 'Download', 'Customize', and 'Other'. The main content area is titled 'Condition Value Option' and displays the following information:

- Column: BCOST NUMERIC(9) Price in US\$
- Operator: Less than or equal to
- Navigation: [Column](#) > [Operator](#) > [Value option]
- Instruction: Select how the condition value is specified.
- Option 1: **Specify condition value now**
The user is not prompted for input when the request is run. The SQL Wizard displays a page to enter the condition value.
- Option 2: **Prompt for condition value when request is run**
The user is prompted for the condition value when the request is run. The SQL Wizard displays pages to specify how the condition prompt is displayed.

At the bottom of the dialog are four buttons: Back, Next, Apply, and Cancel.

Chose Operator and Prompt Type

- Choose a comparison operator just like we did in the static query example
- Select how the user will be prompted for the values

iSeries Access for Web

Condition Operator

Column: BCOST NUMERIC(9) Price in US\$

Column > [Operator]

Select an operator.

Exactly equal to Between
 Not equal to Not between
 Greater than Null
 Greater than or equal to Not null
 Less than
 Less than or equal to

Back Next Apply Cancel

iSeries Access for Web

Condition Prompt - Option

Column: BCOST NUMERIC(9) Price in US\$

Operator: Less than or equal to

Value option: Prompt when request is run

Prompt option: Select from existing values

Column > Operator > Value option > Prompt > [Option]

Select how the condition value is specified.

Enter value
 The user enters the value in a field. The SQL Wizard displays a page to specify the initial value for this field.

Select from list of predefined values
 The user selects the value from a list. The SQL Wizard displays a page to specify the values shown in the list.

Select from list of existing column values
 The user selects the value from a list. The list contains the unique column values in the table when the request is run. The SQL Wizard displays a page to select the maximum number of values shown in the list. If this value is exceeded, the list is replaced with a field for the user to enter the value.

Back Next Apply Cancel

Chose Operator and Prompt Type

- **Setting Initial Value that Boats can cost equal to or less than \$3,000,000**
- **Adding Text to explain to user what to enter in this column**
- **User can then change value**

Condition Prompt - Initial Value

Column: BCOST NUMERIC(9) Price in US\$
 Operator: Less than or equal to
 Value option: Prompt when request is run
 Prompt option: Enter value

[Column](#) > [Operator](#) > [Value option](#) > [Prompt](#) > [Option](#) > [\[Initial value\]](#)

Specify the initial value. If no value is specified, the field is displayed without an initial value.

3000000

Condition Prompt - Layout Settings

Column: BCOST NUMERIC(9) Price in US\$
 Operator: Less than or equal to
 Value option: Prompt when request is run
 Prompt option: Enter value
 Layout option: Text only

[Column](#) > [Operator](#) > [Value option](#) > [Prompt](#) > [Option](#) > [Initial value](#) > [Layout option](#) > [\[Layout settings\]](#)

Specify the prompt text. Line breaks are preserved if the 'Text contains HTML tags' option is not selected.

Boat Cost Upper Limit

Text contains HTML tags

Can Include Multiple Conditions on Dynamic SQL Requests

- Let's add another condition to this Dynamic SQL Request

SQL Wizard

```
SELECT
  "BCOST", "BTYPE", "BNAME", "BFEET", "BYEAR"
FROM
  BOATS.BOATS
WHERE
  ( ("BCOST" <= ?) )
```

Action	Condition	Prompt Label	Prompt Text	Prompt Option
	("BCOST" <= ?)	Boat Cost Upper Limit	Boat Cost Upper Limit	Enter value

To add a condition, click Add New Condition. To continue, click Next.

[Add New Condition](#)

[Back](#) [Next](#) [Finish](#) [Cancel](#)

Related Links:

- iSeries Access for Web
- iSeries Access
- iSeries Navigator
- iSeries Information Center
- iSeries Resource Library

Setting up Additional Operator and Prompt Type

- For 'Type of Boat', we will select from list of Types in our Database File

The screenshot shows the 'Condition Prompt - Option' configuration page in the iSeries Access for Web interface. The page title is 'Condition Prompt - Option'. The configuration details are as follows:

- Column: BTYPE CHAR(1) P=Powered S=Sailing
- Operator: Exactly equal to
- Value option: Prompt when request is run

The breadcrumb navigation is: [Column](#) > [Operator](#) > [Value option](#) > [Prompt](#) > [\[Option\]](#)

The instruction is: 'Select how the condition value is specified.'

There are three radio button options:

- Enter value: The user enters the value in a field. The SQL Wizard displays a page to specify the initial value for this field.
- Select from list of predefined values: The user selects the value from a list. The SQL Wizard displays a page to specify the values shown in the list.
- Select from list of existing column values: The user selects the value from a list. The list contains the unique column values in the table when the request is run. The SQL Wizard displays a page to select the maximum number of values shown in the list. If this value is exceeded, the list is replaced with a field for the user to enter the value.

At the bottom, there are buttons for 'Back', 'Next', 'Apply', and 'Cancel'.

- Two (2) types of boats in the database file

The screenshot shows the 'Condition Prompt - Layout Settings' configuration page in the iSeries Access for Web interface. The page title is 'Condition Prompt - Layout Settings'. The configuration details are as follows:

- Column: BTYPE CHAR(1) P=Powered S=Sailing
- Operator: Exactly equal to
- Value option: Prompt when request is run
- Prompt option: Select from existing values
- Layout option: Label only

The breadcrumb navigation is: [Column](#) > [Operator](#) > [Value option](#) > [Prompt](#) > [Option](#) > [Maximum list size](#) > [Initial value](#) > [Layout option](#) > [\[Layout settings\]](#)

The instruction is: 'Specify the prompt label.'

The input field contains: 'P=Powered S=Sailing exactly equal to:'

At the bottom, there are buttons for 'Back', 'Finish Edit', 'Apply', and 'Cancel'.

Set Display Order and See Conditions Set

- Will display information based on 'Boat Cost' in descending order
- Shows how SQL has been written based on 2 Conditions

SQL Wizard

```
SELECT
  "BCOST", "BTYPE", "BNAME", "BFEET", "BYEAR"
FROM
  BOATS.BOATS
WHERE
  ( ("BCOST" <= ?) AND
    ("BTYPE" = ?) )
```

Sort

Select which columns to use when sorting the data. If no columns are selected, data is returned in the order it was inserted.

Column	Description	Direction
<input type="checkbox"/> BTYPE	P=Powered S=Sailing	Ascending
<input type="checkbox"/> BNAME	boat name	Ascending
<input type="checkbox"/> BFEET	Length in feet	Ascending
<input type="checkbox"/> BYEAR	Year built	Ascending
<input checked="" type="checkbox"/> BCOST	Price in US\$	Descending
<input type="checkbox"/> BNT01	Note 1	Ascending
<input type="checkbox"/> BNT02	Note 2	Ascending
<input type="checkbox"/> BNT03	Note 3	Ascending
<input type="checkbox"/> BNT04	Note 4	Ascending

SQL Wizard

```
SELECT
  "BCOST", "BYEAR", "BTYPE", "BNAME", "BFEET"
FROM
  BOATS.BOATS
WHERE
  ( ("BCOST" <= ?) AND
    ("BTYPE" = ?) )
ORDER BY
  "BCOST" DESC
```

Condition

Action	Condition	Prompt Label	Prompt Text	Prompt Option
<input checked="" type="checkbox"/>	("BCOST" <= ?)	Price in US\$ less than or equ...	Enter value	
<input checked="" type="checkbox"/>	AND ("BTYPE" = ?)	P=Powered S=Sailing T=Tug	Select from existing values	

To add a condition, click Add New Condition. To continue, click Next.

[Add New Condition](#)

[Back](#) [Next](#) [Finish](#) [Cancel](#)

User Runs Dynamic Query built with 2 Conditions

User selects

- Maximum cost of boat
- Type of Boat

The SQL Output was set up to show in Descending Order by Boat Cost

Run SQL

Boat Cost Upper Limit
1000000

P=Powered S=Sailing exactly equal to: S

OK Cancel

SQL Output

BCOST	BTYPE	BNAME	BFEEET	BYEAR
450000	S	Merlin's Magic	54	1990
269500	S	Seafinn 411 Motorsailer Ketch	41	1989
179500	S	Fontaine Pajot Antigua	37	1993
179000	S	Nauticat 40	40	1989
159900	S	Shannon 50 ketch	50	1981
149000	S	Brandlmayr 48	48	1985
80000	S	Garden Design Porpoise Ketch	51	1974
69950	S	Corsair 27	27	1994
69000	S	Morgan 382 Race/Cruise Sloop	38	1978
63000	S	Mariner Ketch	40	1979
57900	S	Hunter 33.5	33	1990
27500	S	Bill Garden Schooner	36	1953

Dynamic query – wizard warning

- Dynamic queries generated by the wizard can only be modified using the wizard
- If you wish to create your own you will need to manually add parameter markers directly into the SQL statements and create your own web page to prompt for the values

iSeries Access for Web User: CMINER System: LP120AB.RCHLAND.IBM.COM

My Home Page SQL Wizard completed successfully.

My Folder

Print

Messages

Jobs

5250

Database

• Tables

• My requests

• Run SQL

• Copy data to table

Continue

Note: Use the SQL wizard to make additional updates to the SQL statement. If updates are made using the wizard, the SQL wizard can no longer be used with the updated statement. Also, all prompts in the wizard and the request might not run successfully.

iSeries Access for Web IBM

My Home Page

My Folder

Print

Messages

Jobs

5250

Database

• Tables

• My requests

• Run SQL

• Copy data to table

• Import request

• Import query

• Extract server data

Files

Command

Download

Customize

Other

Related Links:

• iSeries Access for Web

• iSeries Access

• iSeries Navigator

• iSeries Information Center

Edit SQL Request

SQL Statement

```
SELECT
"BCOST", "BYEAR", "BTYPE", "BNAME", "BFEET"
FROM
BOATS.BOATS
WHERE
( ("BCOST" <= ?) AND
```

SQL Wizard

SQL Output

Type: Preview Settings

Destination: Browser Settings

Format

Date: 12/5/05

Time: 5:55:04 PM

Connection

Connection: IBM Toolbox for Java - LP126AB.RCHLAND.IBM.COM

Run SQL Save Request...

Dynamic Query – Form Example

- Want to use different button style
- Want button next to prompt control, not underneath it
- Form element:
 - `<FORM name=accessories action="http://server/webaccess/iWADbExec" method="get">`
- Hidden element:
 - `<input type="hidden" name="request" value="req" />`
- Entry field:
 - `<input type="text"`
 - `name="iwaparm_1" value="" />`

Great way to add Database requests to your existing web pages




SQL Output Destinations



SQL Output Destinations

Choosing a destination

Choose from 4 different output destinations:

- Browser
- Email
- Personal folder
- Integrated File System 



iSeries Access for Web

Run SQL

SQL Statement

SQL Wizard

SQL Output

Type: Preview

Destination: Browser

Format

Date: 12/9/

Time: 4:23:09 PM

Connection

Connection: IBM Toolbox for Java - LP126AB.RCHLAND.IBM.COM

Run SQL – Output Browser

The SQL statement is built indicating that Output Type is Microsoft Excel.

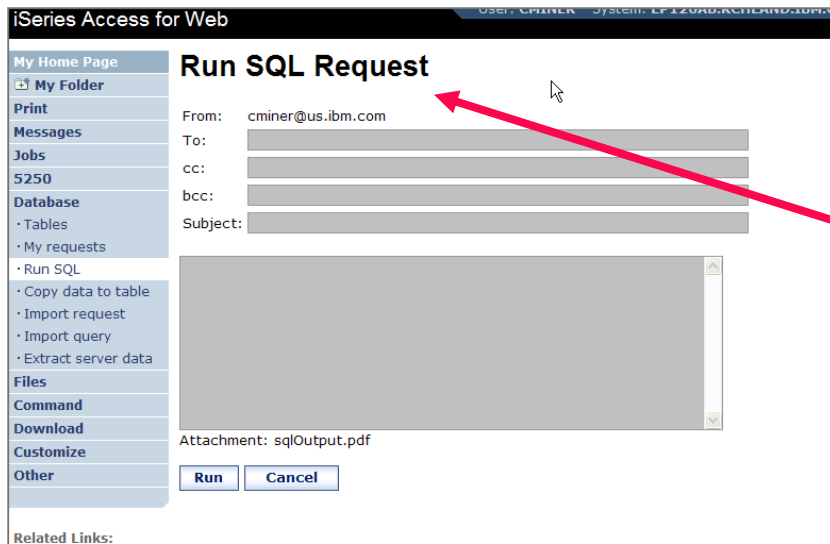
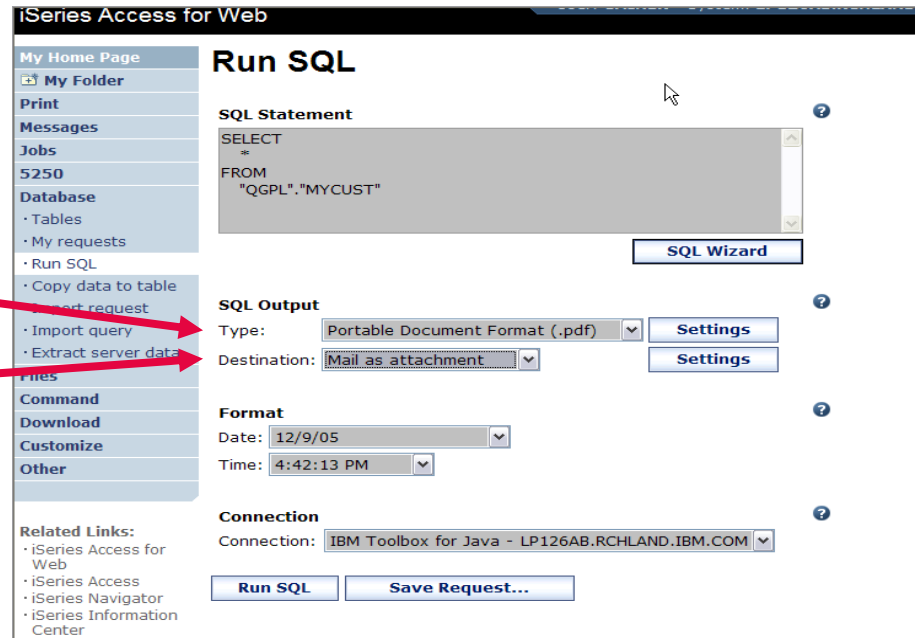
	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	BALDUE	LSTNAM	INIT	STREET	CITY	STATE	ZIPCOD	CUSNUM	COTLMT	CHGCOD	COTDUE			
2	3987.5	Johnson	J A	3 Alpine W	Helen	GA	30545	938485	9999	2	33.5			
3	500	Abraham	M T	392 Mill St	Isle	MN	56342	583990	9999	3	0			
4	489.5	Lee	F L	5963 Oak	Hector	NY	14841	192837	700	2	0.5			
5	439	Vine	S S	PO Box 74	Broton	VT	5046	392859	700	1	0			
6	250	Doe	J W	59 Archer	Sutter	CA	95685	475938	700	2	100			
7	100	Jones	B D	21B NW 1	Clay	NY	13041	839283	400	1	0			
8	58.75	Stevens	K L	208 Snow	Denver	CO	80226	389572	400	1	1.5			
9	37	Henning	G K	4859 Elm	Dallas	TX	75217	938472	5000	3	0			
10	25	Williams	E D	485 SE 2	Dallas	TX	75218	593029	200	1	0			
11	10	Alison	J S	787 Lake	Isle	MN	56342	846283	5000	3	0			
12														
13														

Browser sees the .xls format type and automatically starts Excel on the desktop, and puts results in a spreadsheet

Run SQL – Destination EMAIL

The SQL statement is built indicating that:

- Output Type is PDF
- Destination is EMAIL



Access for Web converts SQL output to .PDF and attaches it to an email.

Note: my email address has been filled in for me

Run SQL – My Personal Folder

The SQL statement is built indicating that:

- Output Type is HTML
- Destination is My Folder

Item	Status	From	Date/Time	Size	Action
<input type="checkbox"/> Status [SQL output in HTML]	Unopened	CMINER	12/9/05 4:52 PM	202	
<input checked="" type="checkbox"/> SQL output in HTML	Unopened	CMINER	12/9/05 4:52 PM	816	
<input type="checkbox"/> Status [SQL output in XLS]	Unopened	CMINER	12/5/05 4:35 PM	297	
<input type="checkbox"/> SQL output in XLS	Opened	CMINER	12/5/05 4:35 PM	3956	

Run SQL

SQL Statement
 SELECT *
 FROM *QGPL.*MYCUST*

SQL Output
 Type: Hypertext Markup Language (.html) Settings
 Destination: Personal folder Settings

Format
 Date: 12/9/05
 Time: 4:42:13 PM

Connection
 Connection: IBM Toolbox for Java - LP126AB.RCHLAND.IBM.COM

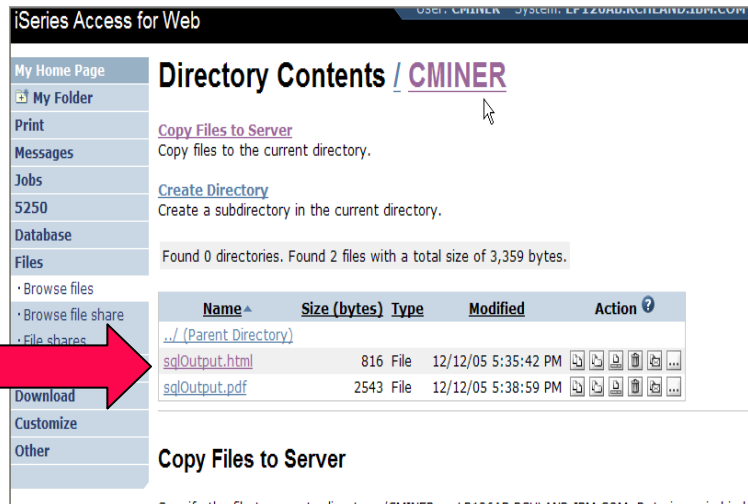
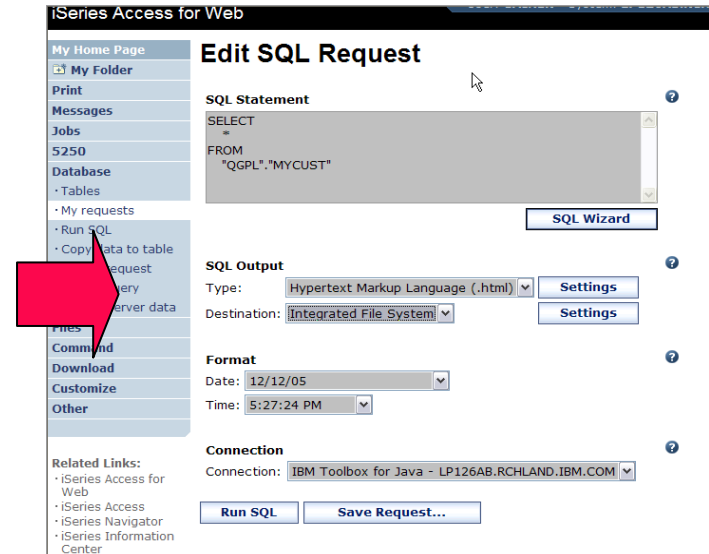
Run SQL Save Request...

- Click on My Folder link
- Select the SQL Output
- Shown to me in HTML

Run SQL – Integrated File System

The SQL statement is built indicating that:

1. Output Type is HTML
2. Destination is Integrated File System
3. Next screen select 'CMINER' directory



4. Click on 'Files' tab
5. Open CMINER directory
6. Click on File Name
7. Results shown in HTML

MYLSTNAM	MYCITY	MYSTATE
Henning	Dallas	TX
Jones	Clay	NY
Vine	Broton	VT
Tyron	Hector	NY
Stevens	Denver	CO
Alison	Isle	MN
Doe	Sutler	CA
Thomas	Casper	WY
Williams	Dallas	TX
Lee	Hector	NY
Abrham	Isle	MN

Destination Settings

You can specify the folder and mail settings before the request is run

Or you can wait until the request is run

Personal Folder Settings

Item description:

Folder owner:

Always prompt for folder settings when request is run

Mail as Attachment Settings

From: cminer@us.ibm.com

To:

cc:

bcc:

Subject:

Attachment: sqlOutput.pdf

Always prompt for mail settings when request is run

Integrated File System Settings

File:

Replace if exists

Always prompt for file settings when request is run

Shortcuts

Give users access to upload/download requests you have created



Shortcuts – working with, managing

Under “Action” column, you can:

- Create shortcuts to existing requests

At bottom of screen, you can:

- List shortcuts you have created
- Delete shortcuts from the list

The screenshot shows the 'iSeries Access for Web' interface. The main content area is titled 'My Requests' and contains a table with the following data:

Request	Description	Action	Shortcut	Created By	Access
Boats By Price	Boats for sale by price	[Icons]	No	CMINER	CMINER
Boats by Price in Excel	Boats for sale by price	[Icons]	No	CMINER	CMINER
Boats For Sale	View all available boats	[Icons]	No	CMINER	CMINER
Find Boat To Buy	Select type and price limits	[Icons]	No	CMINER	CMINER
Shortcut to Find Boat To Buy	Select type and price limits	[Icons]	Yes	CMINER	*PUBLIC
Shortcut to request sql		[Icons]	Yes	secyesi	*PUBLIC
Shortcut to request upload		[Icons]	Yes	secyesi	*PUBLIC

At the bottom of the screen, there are several links: 'Run SQL', 'Copy data to table', and 'Shortcuts to requests you created'. A red arrow points to the 'Shortcuts to requests you created' link, which has a description: 'Displays a list of shortcuts to requests you created. Shortcuts can be deleted from this list.'

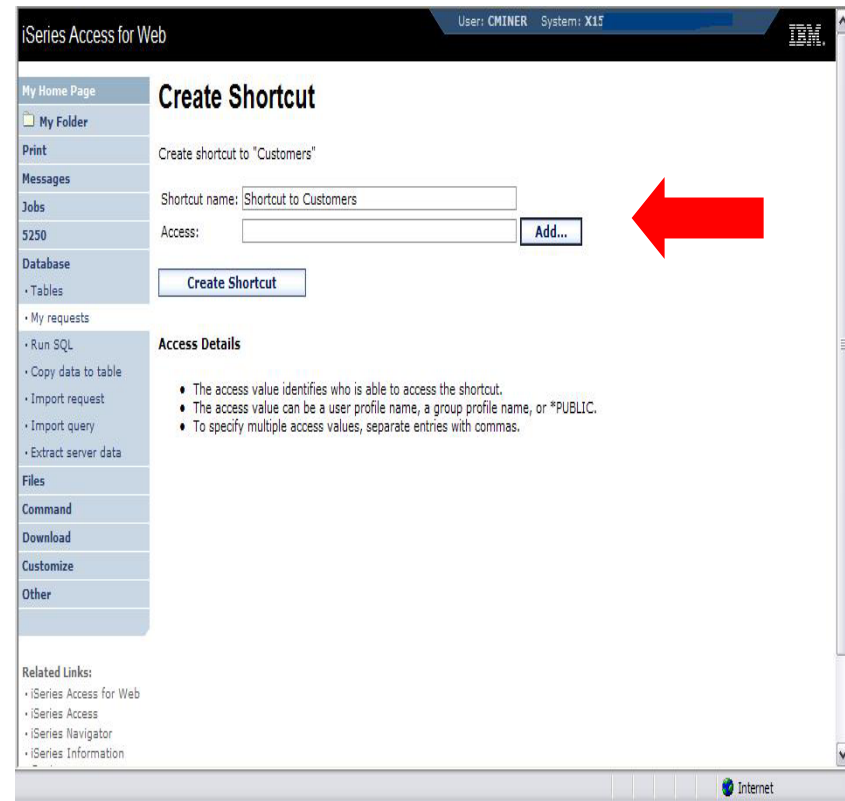
Shortcuts – giving users access

Under “Actions” select Create Shortcuts.

Click browse button to see all users and groups on the system.

- Add the users and groups you want to run this saved request

If the Predefined Request changes, the Shortcut is automatically changed for users too



iSeries Access for Web User: CMINER System: X15

Create Shortcut

Create shortcut to "Customers"

Shortcut name:

Access: **Add...**

Create Shortcut

Access Details

- The access value identifies who is able to access the shortcut.
- The access value can be a user profile name, a group profile name, or *PUBLIC.
- To specify multiple access values, separate entries with commas.

Related Links:

- iSeries Access for Web
- iSeries Access
- iSeries Navigator
- iSeries Information

Set Policies for Building Requests / Using Shortcuts

Policies work on i5/OS User Profiles – Users and Groups

Decide what users can do with your shortcuts

- Copy them
- Delete them

Set up Policies to:

- Allow users to create and modify requests
- or
- Run only previously defined shortcuts

The screenshot shows the 'My Requests' page in the iSeries Access for Web interface. A table lists various requests with columns for Request, Description, Action, Shortcut, Created By, and Access. A yellow callout bubble highlights the 'Shortcut' column header, which is labeled 'Shortcut indicator'.

Request	Description	Action	Shortcut	Created By	Access
Boats By Price	Boats for sale by price	[Icons]	No	CMINER	CMINER
Boats by Price in Excel	Boats for sale by price	[Icons]	No	CMINER	CMINER
Boats For Sale	View all available boats	[Icons]	No	CMINER	CMINER
Find Boat To Buy	Select type and price limits	[Icons]	No	CMINER	CMINER
Shortcut to Find Boat To Buy	Select type and price limits	[Icons]	Yes	CMINER	*PUBLIC
Shortcut to request sql		[Icons]	Yes	secyesi	*PUBLIC
Shortcut to request upload		[Icons]	Yes	secyesi	*PUBLIC

Below the table, there are links for 'Run SQL', 'Copy data to table', and 'Shortcuts to requests you created'. The 'Shortcuts to requests you created' link has a description: 'Displays a list of shortcuts to requests you created. Shortcuts can be deleted from this list.'

User can only run shortcuts previous built by someone else

iSeries Access for Web

My Home Page
Print
5250
Database
• My requests
Files
Download

My Requests

« « « [1] » » » 🔍

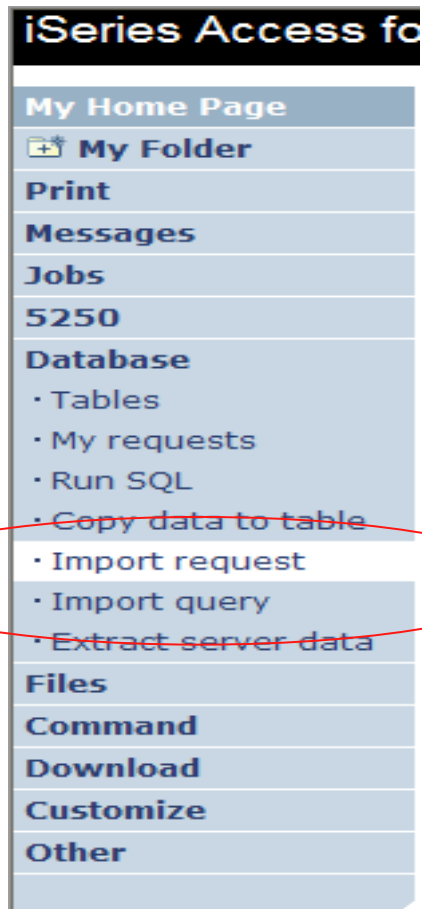
Request	Description	Action	Shortcut	Created By	Access
Shortcut to Boats For Sale	View all available boats		Yes	CMINER	groupa
Shortcut to Find Boat To Buy	Select type and price limits		Yes	CMINER	*PUBLIC
Shortcut to My Customers Mailing	Mail Customer List		Yes	CMINER	groupa
Shortcut to My Customers Mailing	Mail Customer List		Yes	cminer	cminer1
Shortcut to Put My Customer List in Folder	Store Customer List		Yes	CMINER	groupa
Shortcut to request sql			Yes	secyesi	*PUBLIC
Shortcut to request upload			Yes	secyesi	*PUBLIC

« « « [1] » » » 🔍

Shortcuts

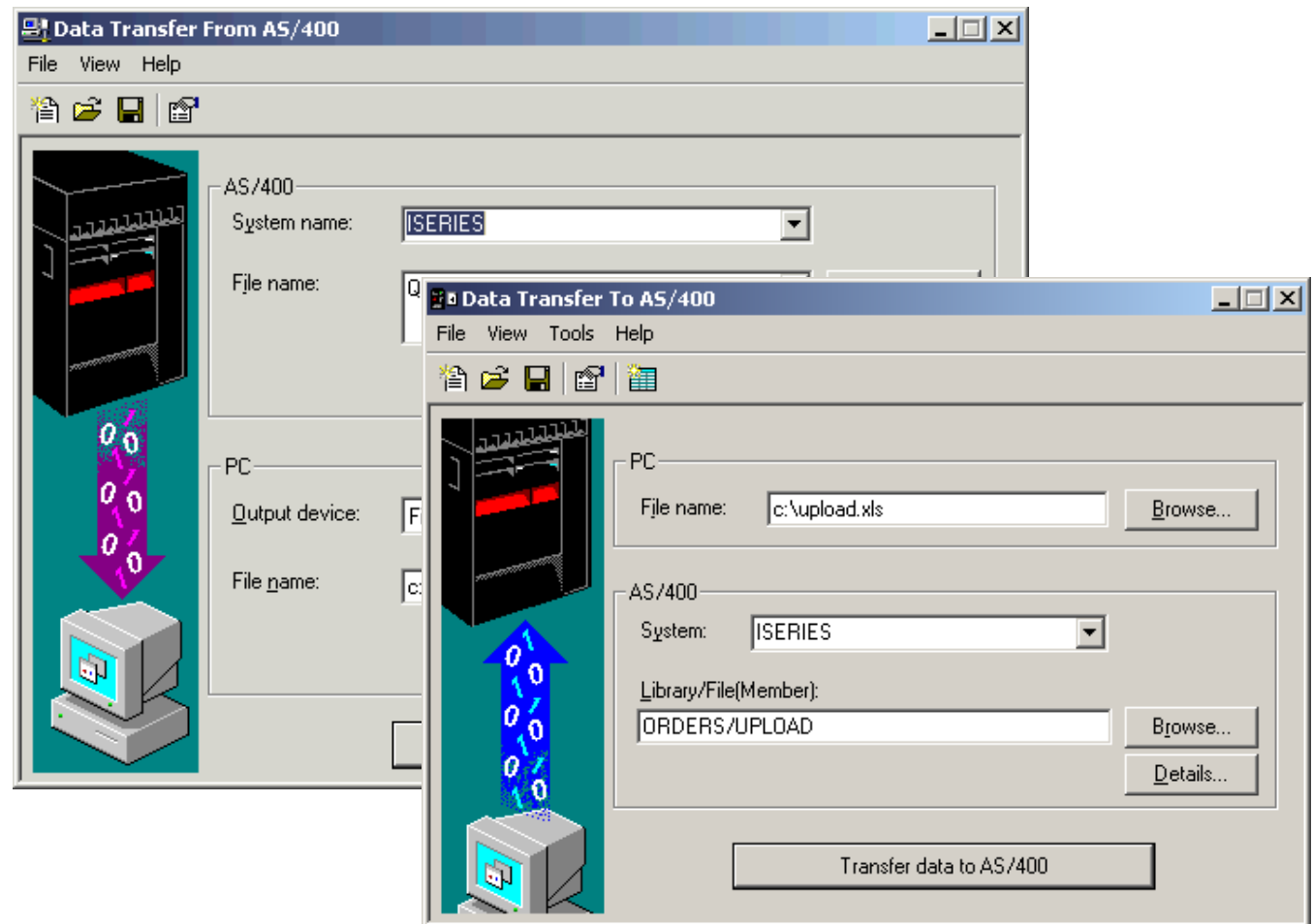
- A database request can only be accessed by the user profile used to create it.

Import Requests and Import Queries



Importing Client Access Data Transfer Requests

Import your existing iSeries Access for Windows and Client Access Data Transfer requests into iSeries Access for Web!



Import Function

- Don't lose your investment in already built Data Transfer requests
- **Import** them into iSeries Access for Web
- The imported transfer request may be run or saved as an iSeries Access for Web request
- Then users can run them from their browsers!

iSeries Access for Web User: CMINER System: LP126AB.RCHLAND.IBM.COM

Import Client Access Data Transfer Request

Specify the Client Access Data Transfer request you want to import. The request will be converted to an iSeries Access for Web request.

Note: The converted iSeries Access for Web request could work differently than the Client Access request. Verifying the converted request is strongly recommended.

Request to Import

Client Access request: Browse...

Character set: Western [windows-1252] ▼

Import Request

Import Details

- The supported transfer request files are as follows:
 - IBM Client Access Express Data Transfer From AS/400 .DTF files
 - IBM Client Access for Windows 95/NT Data Transfer From AS/400 .TTO files
 - IBM Client Access Express Data Transfer To AS/400 .DTT files
 - IBM Client Access for Windows 95/NT Data Transfer To AS/400 .TFR files
- Data Transfer From AS/400 request files are converted to settings that can be used by Run SQL.
- Data Transfer To AS/400 request files are converted to settings that can be used by Copy data to table.
- Choosing an incorrect character set may result in an incorrectly imported request file.

Related Links:

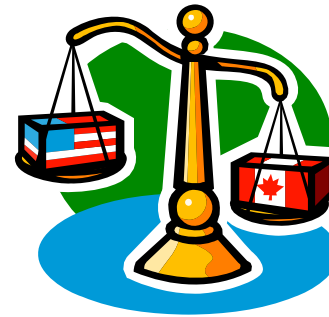
- iSeries Access for Web
- iSeries Access

Import Query Requests

- Bring your existing queries to a browser environment
- Use the **Import Query** tool to bring them into iSeries Access for Web
 - IBM Query for iSeries (5722-QU1)
 - DB2 Query Manager (5722-XT1)

****QMQRy and *QRYDFN
are the query file types supported***

Extract Server Data



Extract Server Data

- Extract i5/OS object information into a database table or tables.
- Then use Tables or Run SQL functions to retrieve relevant data.

The screenshot displays the 'iSeries Access for Web' interface. The main title is 'Extract Server Object Data'. On the left is a navigation menu with options: My Home Page, My Folder, Print, Messages, Jobs, 5250, Database (with sub-options: Tables, My requests, Run SQL, Copy data to table, Import request, Import query, Extract server data), Files, Command, Download, and Customize. The main content area contains the following configuration options:

- Object Data to Extract**: A dropdown menu set to 'User profiles'.
- Table to Receive Data**: An empty text input field for the table name, with a checkbox labeled 'Replace table if table exists' below it.
- Extract Results**: A dropdown menu set to 'Browser'.
- Connection**: A dropdown menu set to 'IBM Toolbox for Java - LP126AB.RCHLAND.IBM.COM'.

At the bottom of the configuration area is a blue button labeled 'Extract Data'. Each of the four main configuration sections has a small question mark icon to its right.

Extract Server Data



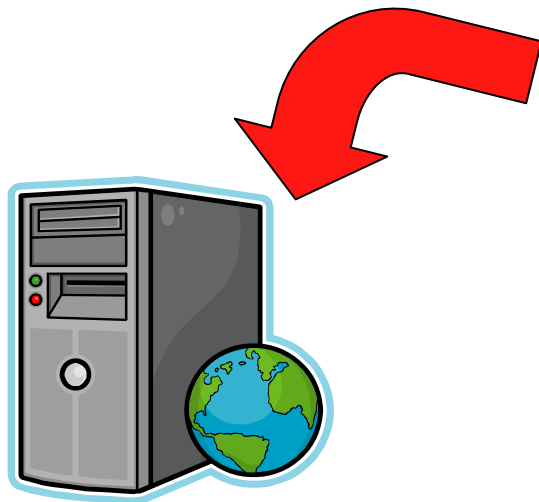
Extract Server Data can be used to retrieve information about i5/OS objects and store the results in a database table

- **General object information can be retrieved for any i5/OS object type.**
- **Object specific information can also be retrieved for the following object types:**

- Directory entries
- Messages
- Software fixes
- Software products
- System pool
- User profiles

- **You could easily build a query:**
 - **To find out what users have used more than 100 MB of storage**
 - **Or you might want to know what users have had more than 2 invalid sign-on attempts in the past three months.**
- **This very powerful capability lets you look at your i5/OS object information in any manner that is of importance to you.**

GUI to work directly with DB2 for i5/OS Table data



Tables – work with i5/OS database information

Series Access for Web

My Home Page

My Folder

Print

Messages

Jobs

5250

Database

- Tables
- My requests
- Run SQL
- Copy data to table
- Import request
- Import query
- Extract server data

Tables

Connection: IBM Toolbox for Java - LP126AB.RCHLAND.IBM.COM

Table filter: *USRLIBL, boats

« « [1] 2 3 4 5 6 7 8 9 » » »

Table	Description	Action ?
BOATS.BOATS	Available BOATS	
BOATS.BOATS1	Available boats by length	
BOATS.PCFILES	PC files needed by BOATS WSG Demo	
BOATS.QCLSRC		
BOATS.QCMDSRC		
BOATS.QDDSSRC		
BOATS.ORNVCVTIG		

Action ?

- **Insert**
- **Update**
- **Quick View**
- **Find**
- **Run SQL**
- **Copy Data To Table**

Working with Tables

iSeries Access for Web B.RCHLAND.IBM.COM IBM

My Home Page

- My Folder
- Print
- Messages
- Jobs
- 5250

Database

- Tables
- My requests
- Run SQL
- Copy data to table
- Import request
- Import query
- Extract server data

Files

Command

Download

Customize

Other

Related Links:

- iSeries Access for Web
- iSeries Access
- iSeries Navigator
- iSeries Information Center
- iSeries Resource Library

Tables

Connection: IBM Toolbox for Java - LP126AB.RCHLAND.IBM.COM
 Table filter: *USRLIBL, boats

« « [1] 2 3 4 5 6 7 8 9 » » » »

Table	Description	Action ?
BOATS.BOATS	Available BOATS	[Icons]
BOATS.BOATS1	Available boats by length	[Icons]
BOATS.PCFILES	PC files needed by BOATS WSG Demo	[Icons]
BOATS.QCLSRC		[Icons]
BOATS.QCMDSRC		[Icons]
BOATS.QDDSSRC		[Icons]
BOATS.QRNCVTLG		[Icons]
BOATS.QRPGLESRC		[Icons]
BOATS.QRPGSRC		[Icons]
QGPL.#	\$	[Icons]
QGPL.BITYPES		[Icons]
QGPL.CHADDEC		[Icons]
QGPL.CONCURTYPE		[Icons]
QGPL.CPY_INFO		[Icons]
QGPL.DAVE		[Icons]
QGPL.DECSEP		[Icons]
QGPL.DIVZERO		[Icons]
QGPL.DIVZERO2		[Icons]
QGPL.DSD		[Icons]
QGPL.DSPSFWRSC	Output file for DSPSFWRSC	[Icons]

Connection & Table Filter

Table Actions

Table Filter

Used to control the tables displayed in the Tables list

Comma-separated list of

- schemas
- schema filters
- tables
- table filters

The % character is used as a wild card character.

*USRLIBL is a special value to identify all tables in the user portion of the library list.

The screenshot shows the 'Edit Policies - Database' page in the iSeries Access for Web interface. The page title is 'Edit Policies - Database' and the profile is 'CMINER'. The table below lists various policies and their settings:

Policy	Derived From	Action	Setting
Database access	Shipped default	Use current setting	Allow
Database tab	Shipped default	Use current setting	Show
Tables	Shipped default	Use current setting	Allow
Maximum table rows	Shipped default	Use current setting	500
Table filter	Profile setting	Use current setting	*USRLIBL, boats
Table filter is user preference	Shipped default	Use current setting	Allow
Insert records into table	Shipped default	Use current setting	Allow
Insert record columns	Shipped default	Use current setting	Columns...
Update records in table	Shipped default	Use current setting	Allow
Update record columns	Shipped default	Use current setting	Columns...
Quick view table records	Shipped default	Use current setting	Allow

Tables → Find Record

- If you don't want users 'updating', 'inserting' or 'deleting' records,
- then let them use only the **Find** function

iSeries Access for Web

My Home Page
My Folder
Print
Messages
Jobs
5250
Database
• Tables
• My requests
• Run SQL
• Copy data to table
• Import request
• Import query
• Extract server data
Files
Command

Find Record

◀◀◀ [1] ▶▶▶ 🔍

Action	BTYPE	BNAME	BFEET	BYEAR	BCOST	BNT01	BNT02	BNT03	BNT04	BNT05
View	C	Poole Boat Co Aluminum	80	1979	1000000	- Located in S. Diego, CA	-Twin Detroit diesels.	-Commercial combination dinner cruise	and long range fishing boat, sleeps 33.	- Own would like to trade DELU
View	P	Monterey Marine Custom	80	1996	2975000	- Located in Stuart, FL	-Monthly payment.	-Fuel: Approximately 2000 gallons	-Water: Approximately 300 gallons	- Tank 4

◀◀◀ [1] ▶▶▶ 🔍

Tables → Update Function

1

iSeries Access for Web

My Home Page
My Folder
Print
Messages
Jobs
5250
Database
Tables
My requests
Run SQL
Copy data to table
Import request
Import query
Extract server data

Select Records to Update

Specify column values, to select which records you want to update. ?

Column	Type	Value	Description
BTYPE	CHAR(1)	<input type="text"/>	P=Powered S=Sailing
BNAME	CHAR(70)	<input type="text"/>	boat name
BFEET	NUMERIC(3,0)	<input type="text" value="80"/>	Length in feet
BYEAR	NUMERIC(4,0)	<input type="text"/>	Year built
BCOST	NUMERIC(9,0)	<input type="text"/>	Price in US\$
BNT01	CHAR(72)	<input type="text"/>	Note 1
BNT02	CHAR(72)	<input type="text"/>	Note 2

**Wildcards
may be used
in the
selection**

2

iSeries Access for Web

My Home Page
My Folder
Print
Messages
Jobs
5250
Database
Tables
My requests
Run SQL
Copy data to table
Import request
Import query
Extract server data

Records to Update

Action	BTYPE	BNAME	BFEET	BYEAR	BCOST	BNT01	BNT02	BNT03	BNT04	BNT05
Update	C	Poole Boat Co Aluminum	80	1979	1000000	- Located in S. Diego, CA	-Twin Detroit diesels.	-Commercial combination dinner cruise boat, sleeps 33.	and long range fishing boat, sleeps	- Own would like to trade DELUXE
Delete										
Update	P	Monterey Marine Custom	80	1996	2975000	- Located in Stuart, FL	-Monthly payment.	-Fuel: Approximately 2000 gallons	-Water: Approximately 300 gallons	- Tank 4
Delete										

3

iSeries Access for Web

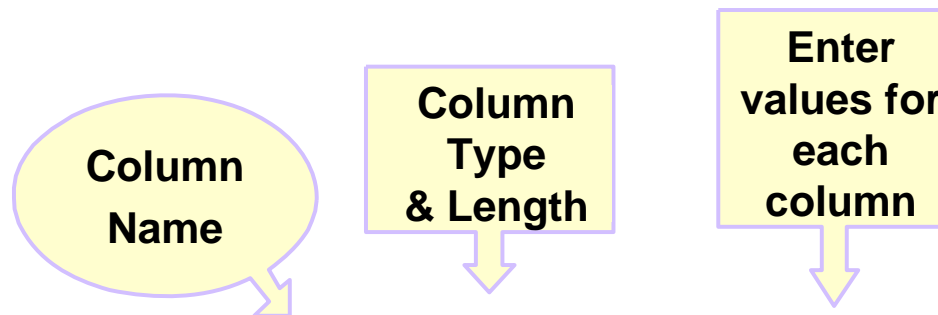
My Home Page
My Folder
Print
Messages
Jobs
5250
Database
Tables
My requests
Run SQL
Copy data to table
Import request
Import query
Extract server data
Files
Command
Download
Customize
Other
Related Links:
iSeries Access for

Update Record

To update the record, change column values and click Update Record. ?

Column	Type	Value	Description
BTYPE	CHAR(1)	<input type="text" value="C"/>	P=Powered S=Sailing
BNAME	CHAR(30)	<input type="text" value="Poole Boat Co Aluminum"/>	boat name
BFEET	NUMERIC(3,0)	<input type="text" value="80"/>	Length in feet
BYEAR	NUMERIC(4,0)	<input type="text" value="1979"/>	Year built
BCOST	NUMERIC(9,0)	<input type="text" value="1000000"/>	Price in US\$
BNT01	CHAR(72)	<input type="text" value="-Located in S. Diego, CA"/>	Note 1
BNT02	CHAR(72)	<input type="text" value="-Twin Detroit diesels."/>	Note 2
BNT03	CHAR(72)	<input type="text" value="-Commercial combination dinner c"/>	Note 3
BNT04	CHAR(72)	<input type="text" value="and long range fishing boat, sleep"/>	Note 4
BNT05	CHAR(72)	<input type="text" value="-Owner would like to trade DELUX"/>	Note 5
BNT06	CHAR(72)	<input type="text" value="up for a larger yacht."/>	Note 6
BNT07	CHAR(72)	<input type="text"/>	Note 7
BNT08	CHAR(72)	<input type="text" value="-Shelter Island Yacht Sales"/>	Note 8

Inserting New Records into A Table



iSeries Access for Web User: CM1NER System: LP120AB.RCHLAND.IBM.COM

My Home Page

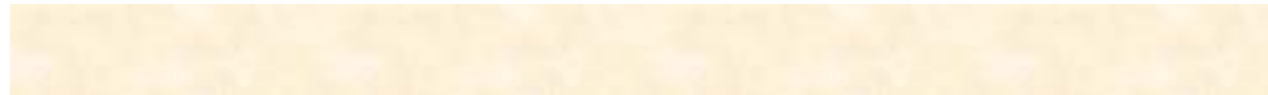
- My Folder
- Print
- Messages
- Jobs
- 5250
- Database
 - Tables
 - My requests
 - Run SQL
 - Copy data to table
 - Import request
 - Import query
 - Extract server data
- Files
- Command
- Download
- Customize
- Other

Insert Record

To insert a record, specify column values and click Insert Record. [?](#)

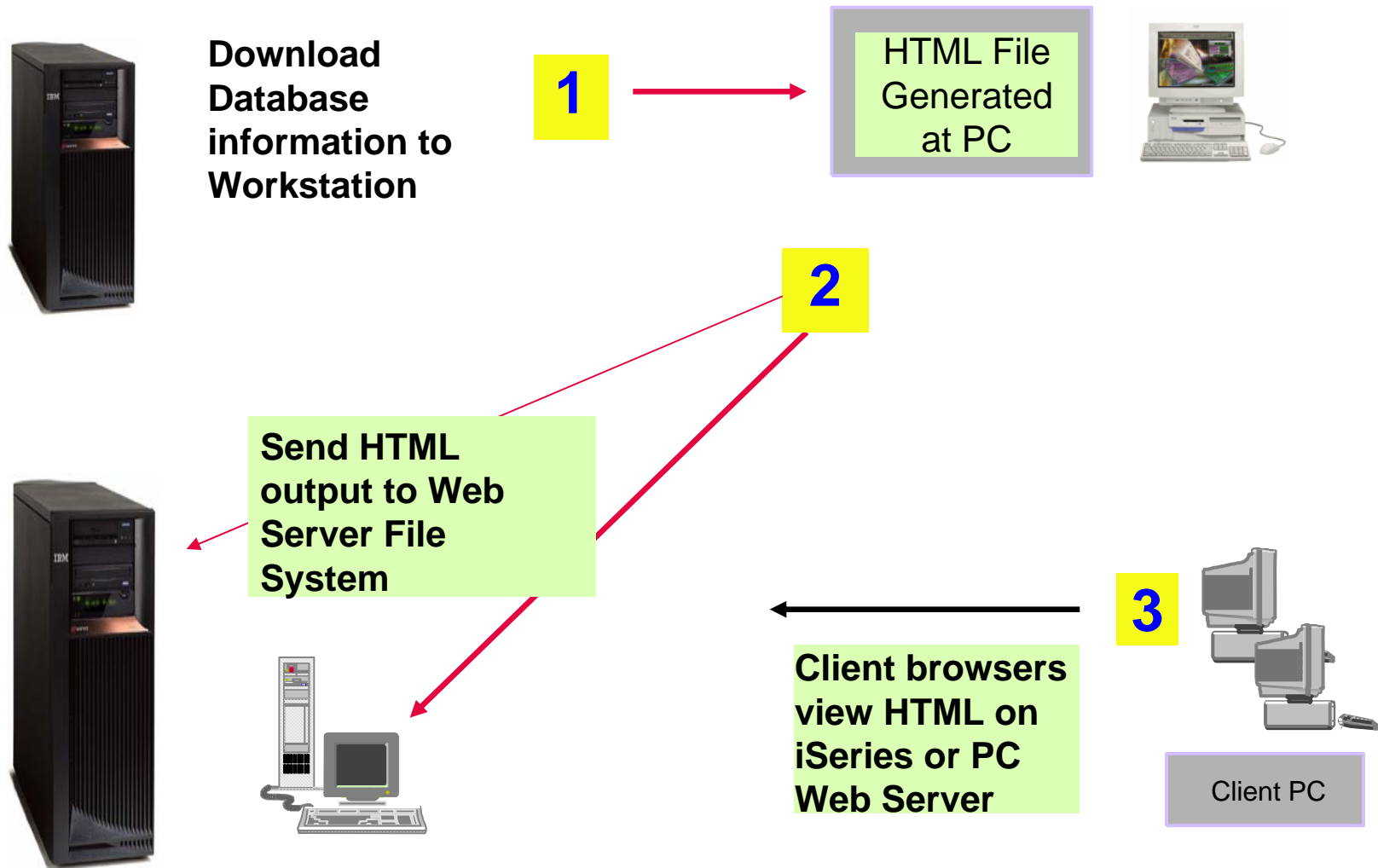
Column	Type	Value	Description
BTYPE	CHAR(1)	<input type="text"/>	P=Powered S=Sailing
BNAME	CHAR(30)	<input type="text"/>	boat name
BFEET	NUMERIC(3,0)	<input type="text" value="0"/>	Length in feet
BYEAR	NUMERIC(4,0)	<input type="text" value="0"/>	Year built
BCOST	NUMERIC(9,0)	<input type="text" value="0"/>	Price in US\$
BNT01	CHAR(72)	<input type="text"/>	Note 1
BNT02	CHAR(72)	<input type="text"/>	Note 2
BNT03	CHAR(72)	<input type="text"/>	Note 3
BNT04	CHAR(72)	<input type="text"/>	Note 4
BNT05	CHAR(72)	<input type="text"/>	Note 5

Appendix A. HTML Output Types



Use HTML File support

Updating a Web server



HTML Output Settings

- Many settings from:
- Caption
- Table
- Cell data

iSeries Access for Web

HTML Output Settings

My Home Page

- My Folder
- Print
- Messages
- Jobs
- 5250
- Database
 - Tables
 - My requests
 - Run SQL
 - Copy data to table
 - Import request
 - Import query
 - Extract server data
- Files
- Command
- Download
- Customize
- Other

Related Links:

- iSeries Access for Web
- iSeries Access
- iSeries Navigator
- iSeries Information Center
- iSeries Resource Library

Caption

Text:

Alignment:

Font size:

Style: Bold Italic Fixed width Underline

Table

Alignment:

Rows per table:

Table width:

Border width: pixels

Cell spacing between cells: pixels

Cell padding within cells: pixels

Cell data:

Include column headings

[Data Settings](#) [Heading Settings](#)

Template

File: [Browse...](#)

Tag:

General

Character set:

Displaying output in a paged list

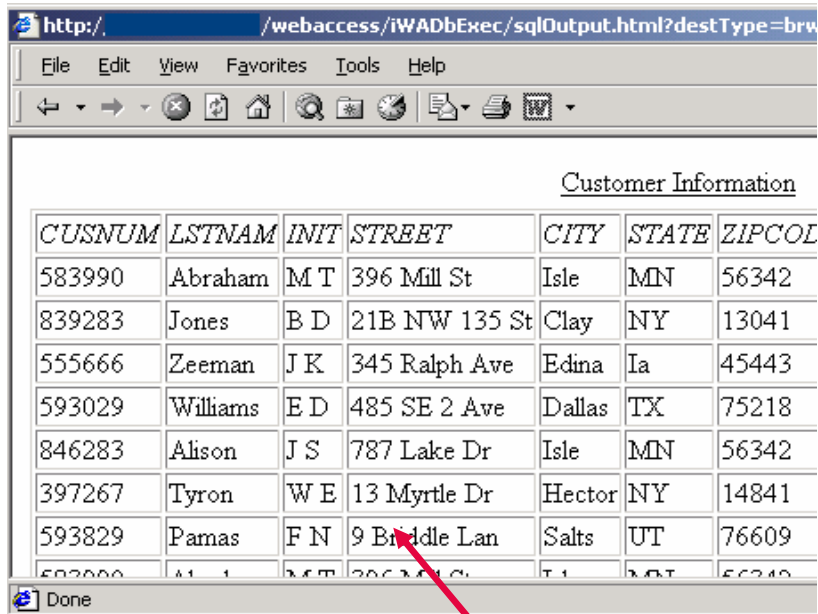
iSeries Access for Web (continued)

The screenshot shows the 'iSeries Access for Web' interface. On the left, a navigation menu includes options like 'Run SQL', 'Copy data to table', 'Import request', 'Import query', and 'Extract server data'. The 'Table' settings panel is active, showing options for Alignment (set to 'Browser default'), Rows per table (set to '15'), Table width, Border width, Cell spacing between cells, Cell padding within cells, and Cell data. There are buttons for 'Data Settings' and 'Heading Settings', and a checkbox for 'Include column headings' which is checked. On the right, the 'SQL Output' section displays a table of data with columns BCOST, BTYPE, BNAME, BFEET, and BYEAR. The table contains 10 rows of data, including entries like '5250', '1588000 P', 'Fairline Squadron', '80', and '2005'.

Jobs	BCOST	BTYPE	BNAME	BFEET	BYEAR
5250	2975000	P	Monterey Marine Custom	80	1996
Database	1588000	P	Fairline Squadron	58	2005
• Tables	1000000	P	Poole Boat Co Aluminum	80	1979
• My requests	750000	P	Spandau Houseboat	720	1995
• Run SQL	450000	S	Merlin's Magic	54	1990
• Copy data to table	450000	P	Seacamper 795 Houseboat	72	2000
• Import request	269500	S	Seafinn 411 Motorsailer Ketch	41	1989
• Import query	249000	P	Miki Miki Original Tug	126	1944
• Extract server data	185000	P	Baveria 50 Yacht	50	2000
Files	179500	S	Fontaine Pajot Antigua	37	1993
Command	179000	S	Nauticat 40	40	1989
Download	159900	S	Shannon 50 ketch	50	1981
Customize	149000	S	Brandlmayr 48	48	1985
Other	80000	S	Garden Design Porpoise Ketch	51	1974
	69950	S	Corsair 27	27	1994

- ❑ Specify a value for 'Rows per table' to limit the number of rows displayed on a page

Contrasting other layouts

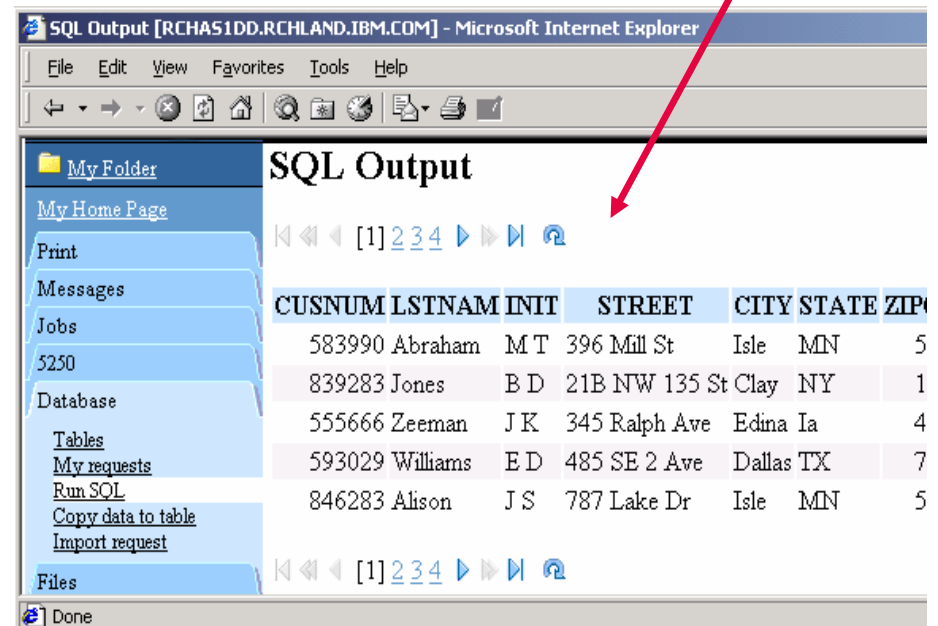


Customer Information

CUSNUM	LSTNAM	INIT	STREET	CITY	STATE	ZIPCOL
583990	Abraham	M T	396 Mill St	Isle	MN	56342
839283	Jones	B D	21B NW 135 St	Clay	NY	13041
555666	Zeeman	J K	345 Ralph Ave	Edina	Ia	45443
593029	Williams	E D	485 SE 2 Ave	Dallas	TX	75218
846283	Alison	J S	787 Lake Dr	Isle	MN	56342
397267	Tyron	W E	13 Myrtle Dr	Hector	NY	14841
593829	Pamas	F N	9 Biddle Lan	Salts	UT	76609
583990	Abraham	M T	396 Mill St	Isle	MN	56342

If you do not specify a value for 'Rows per table', all results are returned in a single page

Preview output type displays a limited number of rows per page, but you can't customize how the list is displayed



SQL Output [RCHAS1DD.RCHLAND.IBM.COM] - Microsoft Internet Explorer

SQL Output

My Folder
My Home Page
Print
Messages
Jobs
5250
Database
Tables
My requests
Run SQL
Copy data to table
Import request
Files

CUSNUM	LSTNAM	INIT	STREET	CITY	STATE	ZIP
583990	Abraham	M T	396 Mill St	Isle	MN	5
839283	Jones	B D	21B NW 135 St	Clay	NY	1
555666	Zeeman	J K	345 Ralph Ave	Edina	Ia	4
593029	Williams	E D	485 SE 2 Ave	Dallas	TX	7
846283	Alison	J S	787 Lake Dr	Isle	MN	5

A template file can be used to display custom content before and after the statement results

The template file must have previously been placed in the Integrated File System (IFS) on the iSeries server

The screenshot shows two overlapping windows from Microsoft Internet Explorer. The top window is the 'HTML Output Settings' dialog, which is used to configure how data is displayed in a web browser. The 'Template' section is highlighted with a red oval, showing the 'File' field set to '/boats/homepage/accesswater.html' and the 'Tag' field set to '%%CONTENT%%'. The 'General' section shows the 'Character set' set to 'Multilingual [UTF-8]'. The bottom window shows the rendered web page, which features the IBM logo, a banner for 'Access for Water' with the tagline 'Supplying quality boats since 2002', and a table of boat data. A 'Home' link is visible in the top right corner of the page content.

BNAME	BFEET	BYEAR	BCOST	BNT01
Mako Sportfisher	19	1989	13000	-Located in Anacortes, WA.
Monk Bridgedeck Cruiser	36	1956	19900	-Built of mahogany, oak, and cedar.
Carver Santa Cruz	28	1978	23900	-Constructed of fiberglass.

iSeries Access for Web (continued)

Example of template file

```
<HTML>
<BODY>
<table>
<tr><td>
<img SRC="boathead.gif" height=43 width=614>
</td>
  <tr>
    <td align="right">
      <a href="/webaccess/iWAHome">Home</a>
    </td>
  </tr>
</table>
<br>
%%CONTENT%%
<br>
<BODY>
</HTML>
```


Appendix B: Comparisons: Similarities / Differences

- **iSeries Access for Web**
- **iSeries Access for Windows**



Supported File Formats

Supported file formats	System i Access for Web Database (servlets)	System i Access for Windows Data Transfer
• Comma Separated Variable	Yes	Yes
• Data Interchange Format	Yes	Yes
• Extensible Markup Language (XML)	Yes	Yes
• Hyper Text Markup Language (HTML) (on downloads)	Yes	Yes
• No conversion		
• ASCII Text	No	Yes
• Text – Tab delimited	Yes	Yes
• Basic Random	Yes	Yes
• Basic Sequential	No	Yes
• DOS Random	No	Yes
• DOS Random Type 2	No	Yes
	No	Yes

Supported File Formats (continued)

Supported file formats	iSeries Access for Web Database (servlets)	iSeries Access for Windows Data Transfer
<ul style="list-style-type: none"> • Preview (on downloads) • Portable Document Format (PDF) (on downloads) 	<p style="text-align: center;">Yes</p> <p style="text-align: center;">Yes</p>	<p style="text-align: center;">Yes</p> <p style="text-align: center;">No</p> <p style="text-align: center;">(can send to PC printer by selecting 'Print' as output device)</p>
<ul style="list-style-type: none"> • Microsoft Excel Version 3 • Microsoft Excel Version 4 • Microsoft Excel Version 5 • Microsoft Excel Version 7 • Microsoft Excel Version 8 • Microsoft Excel XML • Lotus 123 • Lotus 123 Version 1 • Lotus 123 Version 4 • Lotus 123 Version 9 	<p style="text-align: center;">Yes</p> <p style="text-align: center;">Yes</p> <p style="text-align: center;">No</p> <p style="text-align: center;">No</p> <p style="text-align: center;">No</p> <p style="text-align: center;">Yes</p> <p style="text-align: center;">No</p> <p style="text-align: center;">Yes</p> <p style="text-align: center;">No</p> <p style="text-align: center;">No</p> <p style="text-align: center;">No</p>	<p style="text-align: center;">Yes</p> <p style="text-align: center;">Yes</p> <p style="text-align: center;">Yes</p> <p style="text-align: center;">Yes</p> <p style="text-align: center;">Yes</p> <p style="text-align: center;">Yes</p> <p style="text-align: center;">Yes</p> <p style="text-align: center;">No</p> <p style="text-align: center;">Yes</p> <p style="text-align: center;">Yes</p>

Comparison of Database Capabilities

Feature / Function	iSeries Access for Windows	iSeries Access for Web	iSeries Access for Linux
ODBC driver	Yes	No	Yes
OLE DB provider	Yes	No	No
.NET provider	Yes	No	No
From an iSeries, start programs/commands on PC			
– Incoming Remote Command	Yes	No	No
GUI to find, add, update, delete selected records in an iSeries database Table	No	Yes	No
GUI to convert query results to .PDF format	No	Yes	No
GUI to e-mail query results in one step	No	Yes	No
Wizard to import Query/400 SQL requests	No	Yes	No
Wizard to import Query Manager SQL requests	No	Yes	No
Wizard to import iSeries Access for Windows Data Transfer requests	No	Yes	No
Programming Support			
– ActiveX automation Objects	Yes	No	No
– Limited support using java.net.URL and the documented URL Interfaces	No	Yes	No

Comparison of Data Transfer and Access for Web Database

Feature / Function	iSeries Access for Windows	iSeries Access for Web
<ul style="list-style-type: none"> • All SQL Statements Supported • Wizards to build SELECT statements and convert to PC format • Can build SELECT statements with group, having, and join support • Can create dynamic queries (prompted for input at time of running) • Access to members other than the default member 	<p>Yes</p> <p>Yes</p> <p>Yes</p> <p>No</p> <p>Yes</p>	<p>Yes</p> <p>Yes</p> <p>No</p> <p>Yes</p> <p>No</p>
<ul style="list-style-type: none"> • Wizards to upload PC data to iSeries DB2 • Support for Source Physical Files 	<p>Yes</p> <p>Yes (sequence and data generated on uploads is not returned by default)</p>	<p>Yes</p> <p>No (treated the same as other Table Values)</p>
<ul style="list-style-type: none"> • Upload data directly from Excel • Excel dates/times handled as dates/times 	<p>Yes</p> <p>Yes</p>	<p>No</p> <p>No, handled as character strings</p>
<ul style="list-style-type: none"> • Can run predefined saved requests • Schedule requests to run silently • Can Share requests amongst users • Can run multiple requests simultaneously (batch) • Asynchronous Processing (ie, control returned before request completes) 	<p>Yes</p> <p>Yes</p> <p>No, put on shared drive</p> <p>Yes (RTOPCB, RFROMPCB)</p> <p>No</p>	<p>Yes</p> <p>No</p> <p>Yes, via Shortcuts</p> <p>No</p> <p>Yes (except for Browser option)</p>

Request Types

iSeries Access for Web	iSeries Access for Windows
<p>Database Requests From iSeries</p> <ol style="list-style-type: none"> 1. Requests are saved by User name, extension types are not displayed 2. An “Import” Facility (*) can be used to convert iSeries Access for Windows Data Transfer requests to iSeries Access for Web requests 	<p>Data Transfer From iSeries</p> <ol style="list-style-type: none"> 1. .DTF - New request type used by iSeries Access for Windows 2. .TTO - Request type used in 5763-XD1 and DOS Extended clients 3. .DT - Request type used in Windows 3.1 client 4. .RTO - Rumba transfer request file
<p>Database Requests To iSeries</p> <ol style="list-style-type: none"> 1. Requests are saved by User name, extension types are not displayed 2. An “Import” Facility (*) can be used to convert iSeries Access for Windows Data Transfer requests to iSeries Access for Web requests 	<p>Data Transfer To iSeries</p> <ol style="list-style-type: none"> 1. .DTT - New request type used in iSeries Access for Windows 2. .TFR - Request type used in 5763-XD1 and DOS Extended clients 3. .DT - Request type used in Windows 3.1 client 4. .RTO - Rumba transfer request file

(*) RTO files are not supported by Import Facility in iSeries Access for Web

Microsoft Excel Support



What is significance of various Microsoft Excel formats supported?

1. **Microsoft Excel XML** - is the newest type supported by Excel and Word, and it is a defined format that is easy to parse programmatically.
2. For **iSeries Access for Web**, the Microsoft Excel XML file type is the only "native" Excel file type that is supported for working with very large amounts of rows.
3. **iSeries Access for Windows** enables you to work with large amounts of rows using **BIFF5, BIFF7, BIFF8** file types.

Supported file formats	iSeries Access for Web Database (servlets)	iSeries Access for Windows Data Transfer
• Microsoft Excel Version 3	Yes	Yes
• Microsoft Excel Version 4	Yes	Yes
• Microsoft Excel Version 5	No	Yes
• Microsoft Excel Version 7	No	Yes
• Microsoft Excel Version 8	No	Yes
• Microsoft Excel XML	Yes	Yes

Overall Strengths – database function

iSeries Access for Windows

Data Transfer

- Runs natively on Windows; can also run on a Windows web server
- Provides an SQL-like interface to allow full file SELECT or customized queries including joins, sorting, and record grouping. Can run advanced queries.
- Transfer source physical files and data physical files to PC file types
- Transfer PC file types to the source and data physical files on System i.
- Transfers may be run interactively, in batch mode, and programmatically
- Can run requests by clicking an icon
- Can schedule data transfers
- Has Excel Add-ins
- Has ActiveX Automation Objects

iSeries Access for Web

Database:

- Runs on System i web server; sends HTML to browser
- You can work directly with Tables, including Find, Insert, Updating, Delete, and Add. You may also view the entire table.
- Can run any SQL statement
- Supports both Dynamic and Static queries
- SQL Wizard helps you build SELECT statements.
- Can email results in many data formats
- Can convert results to PDF
- Can create Requests and give to other users to run
- Can Import Client Access Data Transfer requests; and IBM Query for iSeries (5722-QU1) and DB2 Query Manager SQL requests.