

Part 6.

System i Access for Web: Database Access



Abstract

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

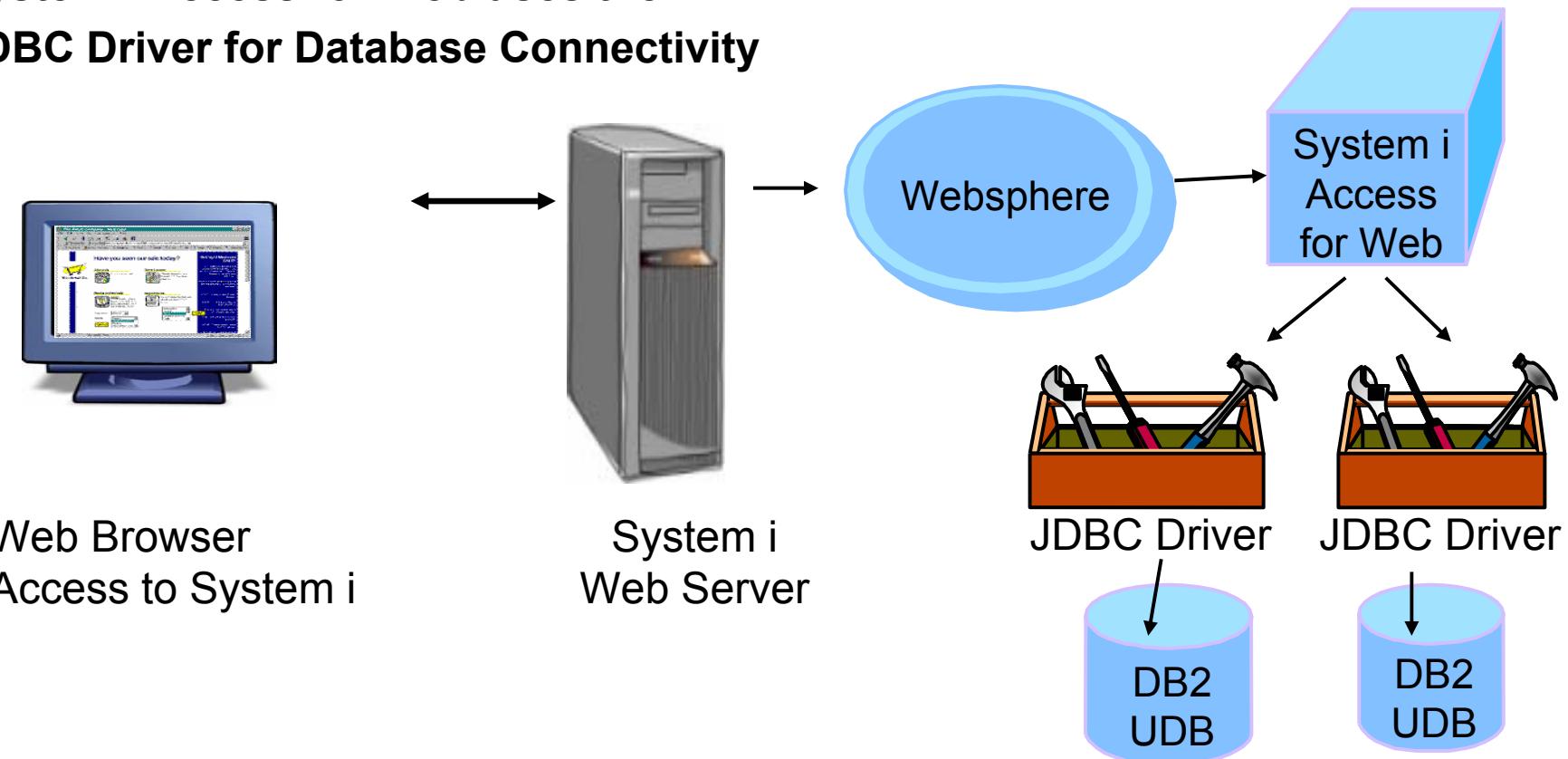
Security and Administration



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 Windows, System i Access for Web, 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/iseries/v5r2/ic2924/index.htm?info/sqlp/rbafymst324.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 System i
- Given the SQL statement sent from the client application (Data Transfer). 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 09/17/2007 - System i 6.1 120.0.0.100/24 ibm.com IBM

Policies

Profile: CMINER

Action	Category	Description	Access
5250	5250	5250 user interface custom settings.	Allowed
Command	Command	Run batch command custom settings.	Allowed
Customize	Customize	Preferences and policy administration custom settings.	Allowed
Database	Database	Database tables, requests, and run SQL custom settings.	Allowed
Database connections	Database connections	Create and edit database connection definitions.	Allowed
Download	Download	Download packages custom settings.	Allowed
Files	Files	Integrated file system and file share custom settings.	Allowed
General	General	Page layout, language and character set custom settings.	Allowed
Jobs	Jobs	Work with jobs custom settings.	Allowed
Mail	Mail	Send mail custom settings.	Allowed
Messages	Messages	Display messages, send messages, and message queue custom settings.	Allowed
My Folder	My Folder	My Folder custom settings.	Allowed
Print	Print	Printer output, printers, printer shares and output queue custom settings.	Allowed
Sametime	Sametime	Lotus Sametime custom settings.	Allowed
Other	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	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	Shipped default	Use current setting	*USRLIBL
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
Maximum quick view rows	Shipped default	Use current setting	1000
Order records by relative record number	Shipped default	Use current setting	No
Find records in table	Shipped default	Use current setting	Allow

Requests	Shipped default	Use current setting	Allow
Run request	Shipped default	Use current setting	Allow
Copy request	Shipped default	Use current setting	Allow
Delete request	Shipped default	Use current setting	Allow
Rename request	Shipped default	Use current setting	Allow
Edit request	Shipped default	Use current setting	Allow
Save request	Shipped default	Use current setting	Allow
List request shortcuts	Shipped default	Use current setting	Allow
Create request shortcut	Shipped default	Use current setting	Allow
Copy request shortcut	Shipped default	Use current setting	Allow
Delete request shortcut	Shipped default	Use current setting	Allow
Rename request shortcut	Shipped default	Use current setting	Allow
Request list columns	Shipped default	Use current setting	Columns...
Run SQL requests	Shipped default	Use current setting	Allow
Run statements other than query	Shipped default	Use current setting	Allow
Copy data to table	Shipped default	Use current setting	Allow
Create new tables	Shipped default	Use current setting	Allow
Append data to tables	Shipped default	Use current setting	Allow
Replace data in tables	Shipped default	Use current setting	Allow
Import request	Shipped default	Use current setting	Allow

shortcut	Use current setting	Allow
Rename request	Shipped default	Use current setting
Request list columns	Shipped default	Use current setting
Run SQL requests	Shipped default	Use current setting
Run statements other than query	Shipped default	Use current setting
Copy data to table	Shipped default	Use current setting
Create new tables	Shipped default	Use current setting
Append data to tables	Shipped default	Use current setting
Replace data in tables	Shipped default	Use current setting
Import request	Shipped default	Use current setting
Import query	Shipped default	Use current setting
Extract server object data	Shipped default	Use current setting
Default connection	Shipped default	Use current setting
Default connection is user preference	Shipped default	Use current setting
Add IBM Toolbox for Java to connection list	Shipped default	Use current setting

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

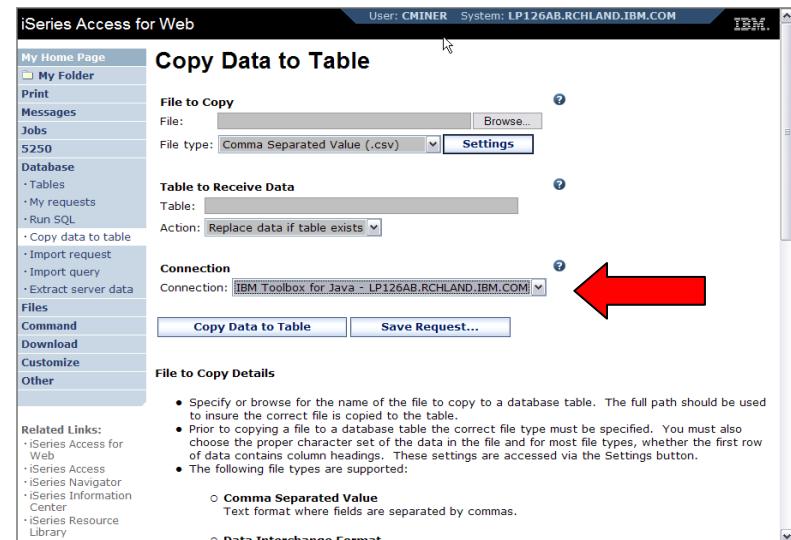
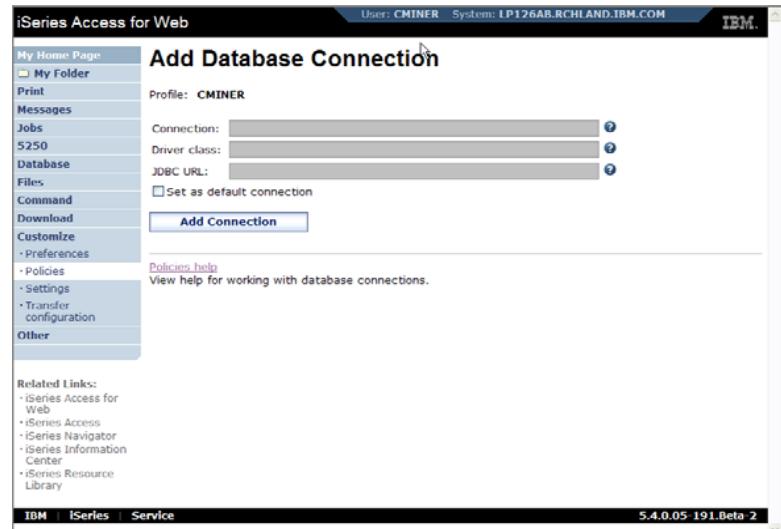


How to work with the database features

When using ‘Database’ functions

You can connect to other multiple different 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
- The default IBM Toolbox for Java is for DB2 for i5/OS, but you could use other driver managers 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

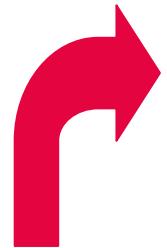


My Requests

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 Requests

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

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: LF1208D.RCHLAND.IBM.COM

SQL Output

BCOST	BYEAR	BTYPE	BNAME	BFEET	BNTO1
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	Bavaria 50 Yacht	50	5 cabins, 3 showers, Volvo TMD22 78PS engine
179500	1993	S	Fountaine 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	-Equipped for cruising and racing

Dynamic Query

Example has 2 conditions the end user can set:

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

Query brings back only database entries meeting conditions

iSeries Access for Web

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

iSeries Access for Web

SQL Output

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	Bavaria 50 Yacht	50	5 cabins, 3 showers, Volvo TMD22 78PS engine

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

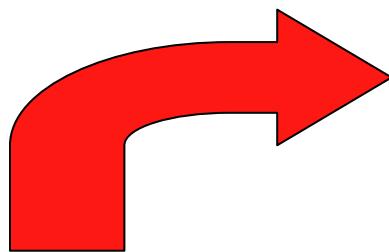
Two types of connection definitions are supported:

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 - 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

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**

The screenshot shows the 'Copy Data to Table' page of the iSeries Access for Web application. The left sidebar contains a navigation menu with options like My Home Page, My Folder, Print, Messages, Jobs, 5250, Database (with sub-options for Tables, My requests, Run SQL, Copy data to table, Import request, Import query, Extract server data), Files, Command, Download, Customize, and Other. Below the main content area, there's a 'Related Links' section with links to iSeries Access for Web, iSeries Access, iSeries Navigator, iSeries Information Center, and iSeries Resource Library.

Copy Data to Table

File to Copy

File: Browse...

File type: Comma Separated Value (.csv)

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**
Text format where fields are separated by commas.

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**

The screenshot shows the 'iSeries Access for Web' interface. The top bar displays 'User: CMINER System: LP126AB.RCHLAND.IBM.COM'. The main window title is 'Copy Data to Table'. A message states 'Table BOATS.DATA does not exist.' Below this, under 'Create options', there are two radio button options: 'View or change column definitions before creating table' (selected) and 'Create table using the source file's column definitions'. At the bottom are 'OK' and 'Cancel' buttons. A detailed description titled 'Create Options Details' follows:

- **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 IBM.

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	

Related Links:

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

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
 - ...

The screenshot shows the 'Run SQL' interface. At the top, it says 'Run SQL or Web' and 'USER: CMINER System: LP126AB.RCHLAND.IBM.COM'. The main area is titled 'Run SQL'.

SQL Statement:
SELECT *
FROM BOATS.BOATS

SQL Wizard button

SQL Output:
Type: Preview **Settings**
Destination: Browser **Settings**

Format:
Date: 11/30/05
Time: 4:44:15 PM

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

Run SQL and **Save Request...** buttons

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**

iSeries Access for Web User: CHINERK System: LF1200D

SQL Wizard

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

My Home Page My Folder Print Messages Jobs 5250 Database Files Command Download Customize Other

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

Welcome

This wizard steps you through creating an SQL select statement.

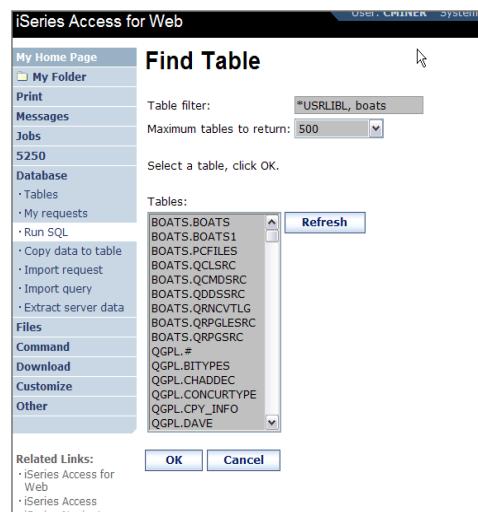
Next Finish Cancel

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



3

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



2

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

Column	Description	Heading
<input checked="" type="checkbox"/> BTTYPE	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

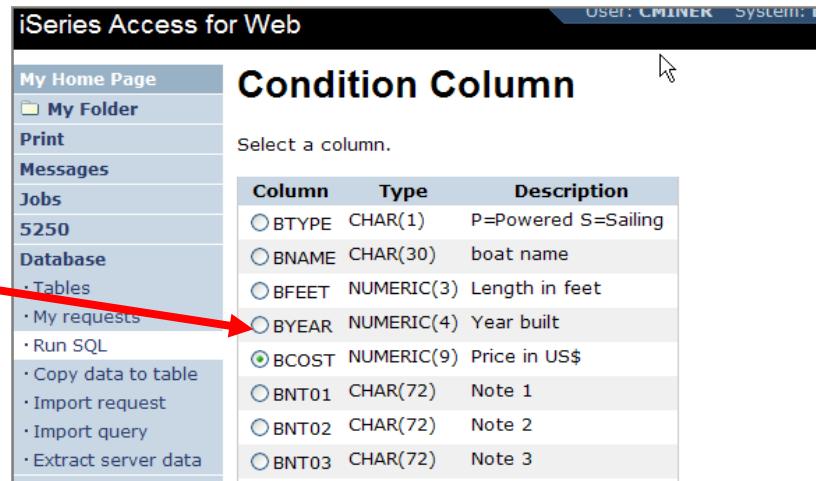
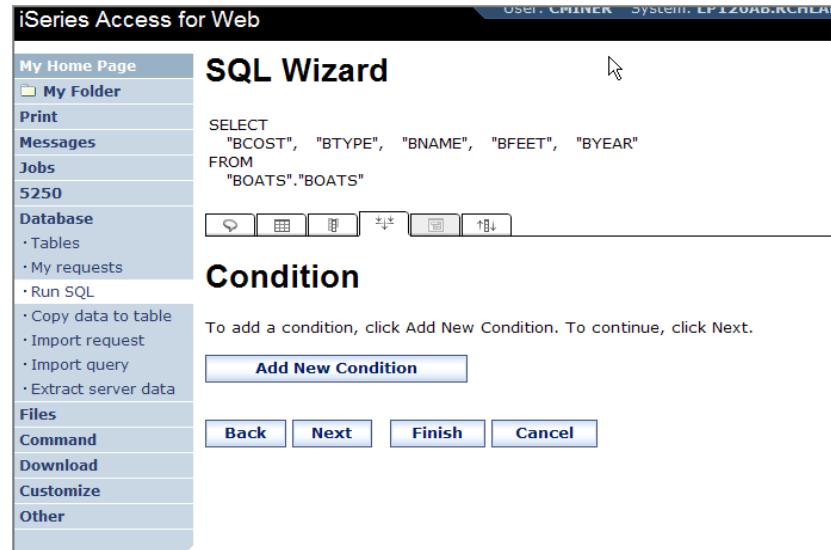
Order	Column	Description
10	BTTYPE	P=Powered S=Sailing
20	BNAME	boat name
30	BFEET	Length in feet
40	BYEAR	Year built
05	BCOST	Price in US\$

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



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

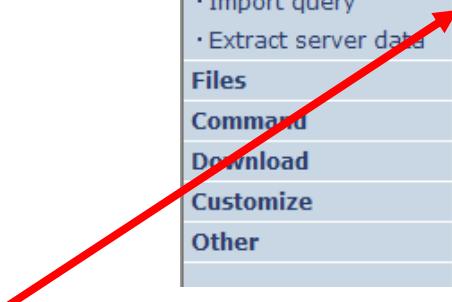
Column: BCOST NUMERIC(9) Price in US\$

[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

Back **Next** **Apply** **Cancel**



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 displays 'iSeries Access for Web', 'User: CMIREK', and 'System: LF120AD.RCHLRND.IBM.COM'. The main content area is titled 'Condition Value Option'. It shows a query definition: 'Column: BCOST NUMERIC(9) Price in US\$' and 'Operator: Less than'. Below this, a link 'Column > Operator > [Value option]' is visible. A note says 'Select how the condition value is specified.' Two options are listed:

- 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.'
- 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 are buttons for '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:

- **A value,**
- **Constant or**
- **Other specific function**

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

Condition Value

Column: BCOST NUMERIC(9) Price in US\$
 Operator: Less than
 Value option: Specify now

[Column](#) > [Operator](#) > [Value option](#) > [\[Value\]](#)

Specify a condition value. The value can be a constant, an SQL register, or a function.

Less than **Find Value**

Value is a constant

Back **Finish Edit** **Apply** **Cancel**

Can find values in table

iSeries Access for Web

Find Value

Search for values that match the following search criteria. If no value is specified, all column values are returned.

Greater than or equal to
 Less than or equal to

Maximum values to return:

Select a value, click OK

Available values:

101	Refresh
132000	
19900	
23990	
27500	
55000	
57900	
63000	
69000	
69950	
86000	
149900	
159900	
179900	
179950	

Related Links:

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

OK **Cancel**

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

iSeries Access for Web

SQL Wizard

```
SELECT
  "BCOST", "BTTYPE", "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"/> BTTYPE	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"/> BNTO1	Note 1	Ascending

iSeries Access for Web

Run SQL

SQL Statement

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

SQL Output

Type: Preview Destination: Browser

Format

Date: 11/30/05 Time: 5:38:22 PM

Connection

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

Buttons: Run SQL, Save Request...

Save the SQL Request

After creating a statement, by hand or with the Wizard you also have the option to store the statement for later use

iSeries Access for Web

Run SQL

SQL Statement

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

SQL Wizard

SQL Output

Type: Preview Settings

Destination: Browser Settings

Format

Date: 11/30/05 Settings

Time: 5:38:22 PM Settings

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 driver.

Can Run it now

Or

Run it later from “My Requests”

iSeries Access for Web

Save Request

Request saved successfully

Create another request Create a new SQL request

My requests Display the list of your requests

Run Boats For Less than \$1,000,000 Run the saved request

Dynamic Query – condition value

Select to prompt for values when the request is run

The screenshot shows the 'iSeries Access for Web' interface with a sidebar menu on the left and a main content area on the right.

Left Sidebar (My Home Page):

- 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

Main Content Area:

Condition Value Option

Column: BCOST NUMERIC(9) Price in US\$
Operator: Less than or equal to

[Column](#) > [Operator](#) > [\[Value option\]](#)

Select how the condition value is specified.

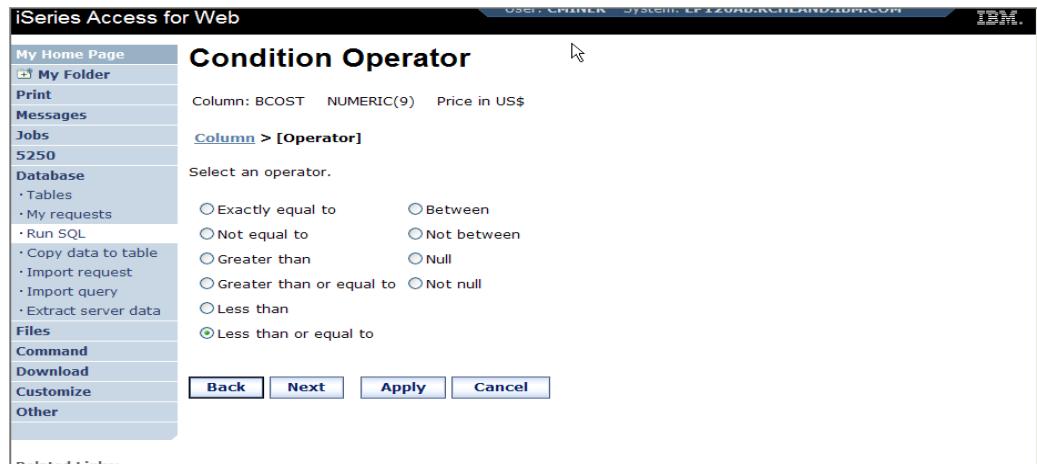
Specify condition value now
The user is not prompted for input when the request is run. The SQL Wizard displays a page to enter the condition value.

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.

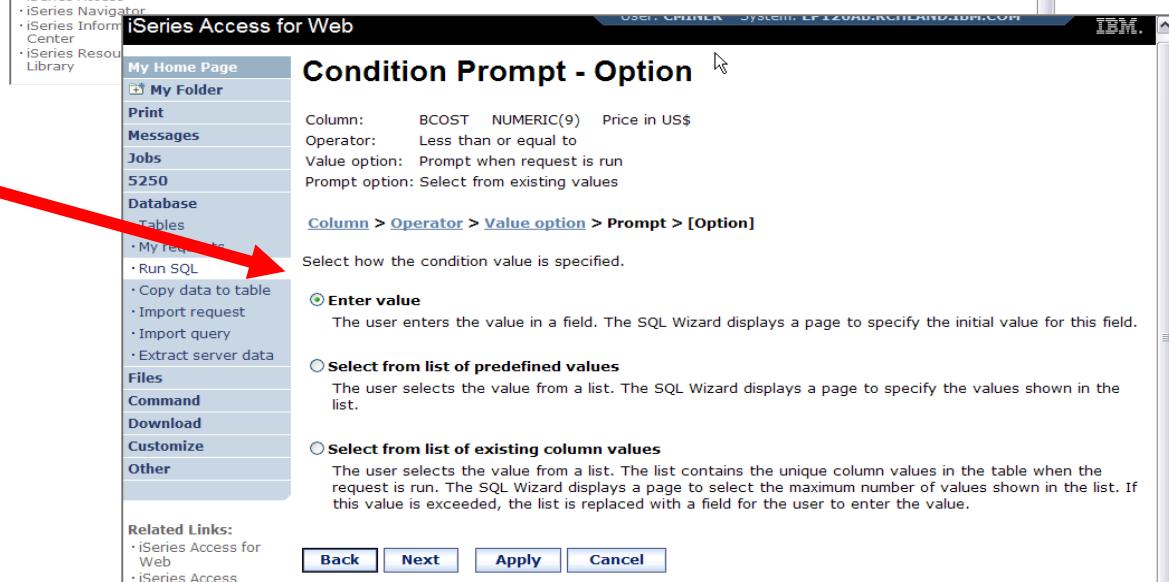
Buttons at the bottom: Back, Next, Apply, Cancel

Choose 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



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

The image displays two screenshots of the iSeries Access for Web interface, illustrating the configuration of a condition prompt.

Screenshot 1: Condition Prompt - Initial Value

This screenshot shows the "Condition Prompt - Initial Value" configuration screen. The left sidebar lists navigation options like My Home Page, Print, Messages, Jobs, 5250, Database, Files, Command, Download, Customize, and Other. The main panel displays the following details:

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

A yellow box labeled "1" is positioned in the top right corner of the main panel. Below the details, a URL link is shown: [Column > Operator > Value option > Prompt > Option > \[Initial value\]](#). A text input field contains the value "3000000". At the bottom are buttons for Back, Next, Finish Edit, Apply, and Cancel.

Screenshot 2: Condition Prompt - Layout Settings

This screenshot shows the "Condition Prompt - Layout Settings" configuration screen. The left sidebar is identical to the first screenshot. The main panel displays the following details:

- 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

A yellow box labeled "2" is positioned in the top right corner of the main panel. Below the details, a URL link is shown: [Column > Operator > Value option > Prompt > Option > Initial value > Layout option > \[Layout settings\]](#). A text area contains the text "Boat Cost Upper Limit". A checkbox labeled "Text contains HTML tags" is present below the text area. At the bottom are buttons for Back, Finish Edit, Apply, and Cancel.

Can Include Multiple Conditions on Dynamic SQL Requests

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

iSeries Access for Web

SQL Wizard

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

Condition

Action	Condition	Prompt Label	Prompt Text	Prompt Option
	("BCOST" <= ?)	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 iSeries Access for Web. The left sidebar lists various navigation options like My Home Page, My Folder, Print, Messages, Jobs, 5250, Database, Files, Command, Download, Customize, and Other. The main content area displays the following details:

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

[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.

Buttons at the bottom: Back, Next, Apply, Cancel.

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

The screenshot shows the 'Condition Prompt - Layout Settings' configuration page in iSeries Access for Web. The left sidebar is identical to the previous screen. The main content area displays the following details:

Column: BTTYPE 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

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

Specify the prompt label.

Buttons at the bottom: Back, Finish Edit, Apply, Cancel.

Set Display Order and See Conditions Set

- Will display information based on 'Boat Cost' in descending order

SQL Wizard - Sort

```

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"/> PTYPE	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
<input type="checkbox"/> BNT05	Note 5	Ascending

SQL Wizard - Condition

```

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

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

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

Add New Condition

Back Next Finish Cancel

User Runs Dynamic Query built with 2 Conditions

User selects

- Maximum cost of boat
- Type of Boat

iSeries Access for Web

Run SQL

Boat Cost Upper Limit
1000000

P=Powered S=Sailing exactly equal to:

OK Cancel

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

iSeries Access for Web

SQL Output

[1]

BCOST	BTYPE	BNAME	BFEET	BYEAR
450000	S	Merlin's Magic	54	1990
269500	S	Seafinn 411 Motorsailer Ketch	41	1989
179500	S	Fountaine 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

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

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

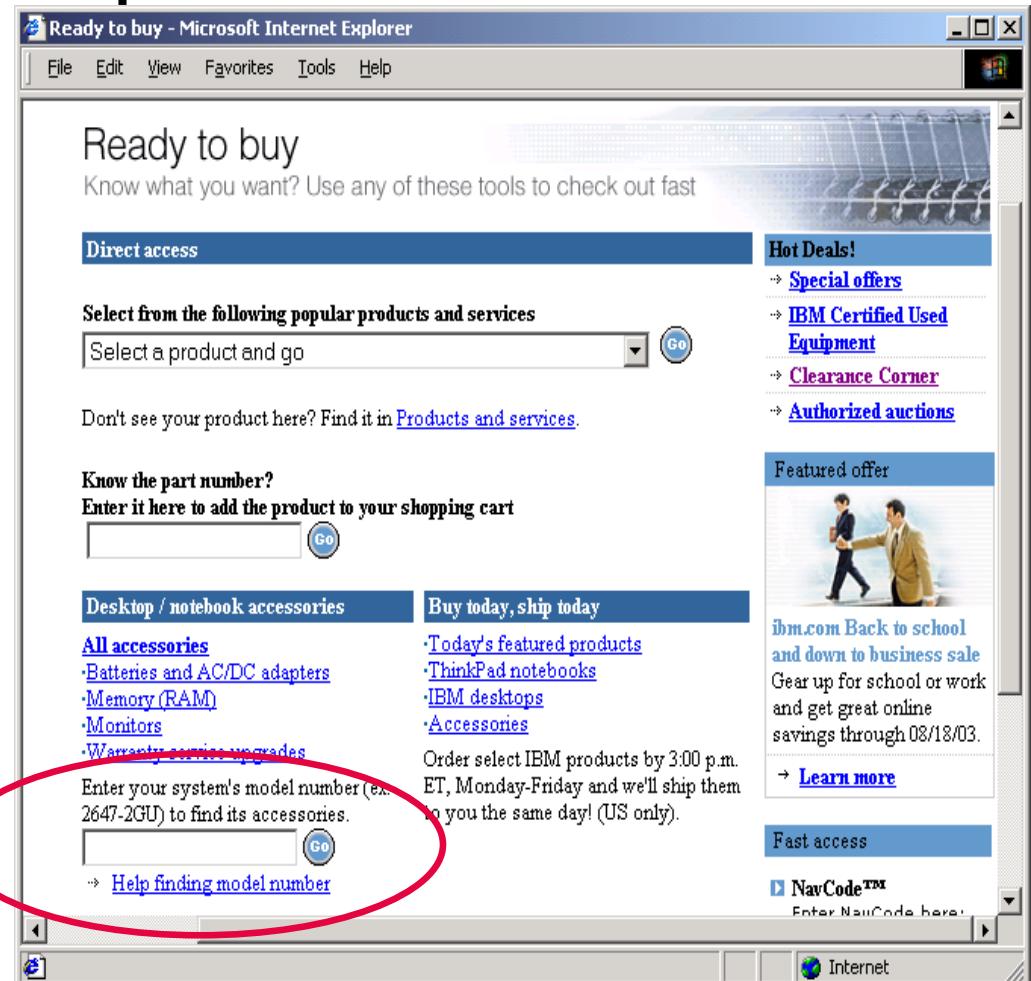
The screenshot shows two instances of the iSeries Access for Web interface. The top window displays a success message: "SQL Wizard completed successfully." It includes a "Note" about using the wizard for updates and a "Continue" button. The bottom window is titled "Edit SQL Request" and contains a SQL statement:

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

A red arrow points from the "My requests" link in the left sidebar of the top window down to the "Run SQL" link in the left sidebar of the bottom window, highlighting the transition between the wizard-generated and manually edited states.

Dynamic Query – Form Example

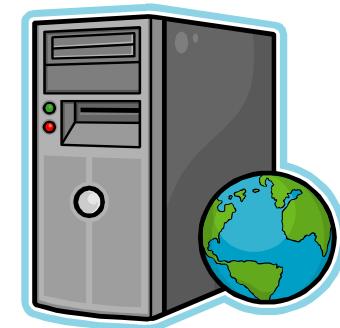
- Want to use different button style
- Want button next to prompt control, not underneath it
- Form element:
 - <FORM name=accessories action="http://server/webaccess/iWADbExec" method="get">
- Hidden element:
 - <input type="hidden" name="request" value="req" />
- Entry field:
 - <input type="text"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

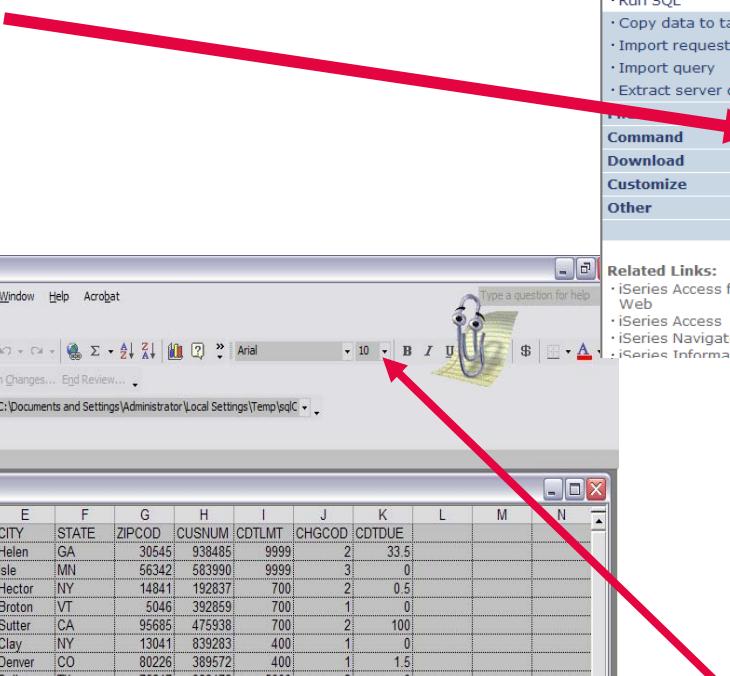
- Browser
- Email
- Personal folder

V5R4 Integrated File System

The screenshot shows the 'Run SQL' page of the iSeries Access for Web application. On the left is a navigation menu with options like My Home Page, My Folder, Print, Messages, Jobs, 5250, Database, Files, Command, Download, Customize, and Other. Below the menu are Related Links for iSeries Access for Web, iSeries Access, and iSeries Navigator. The main area is titled 'Run SQL' and contains sections for 'SQL Statement' (with a large text input field), 'SQL Output' (with Type set to 'Preview' and Destination set to 'Browser'), 'Format' (with options like 'Browser', 'Integrated File System', 'Mail as attachment', and 'Personal folder'), and 'Connection' (with a connection set to 'IBM Toolbox for Java - LP126AB.RCHLAND.IBM.COM'). A dropdown menu under 'Destination' is open, showing 'Browser' as the current selection, along with 'Integrated File System', 'Mail as attachment', and 'Personal folder'. At the bottom are 'Run SQL' and 'Save Request...' buttons.

Run SQL – Output Browser

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



Microsoft Excel

File Edit View Insert Format Tools Data Window Help Acrobat

Type a question for help

Related Links:

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

A1 f BALDUE

sqlOutput.xls

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	BALDUE	LASTNAME	INIT	STREET	CITY	STATE	ZIPCODE	CUSNUM	CDTLMT	CHGCODE	CDTDUE			
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 78 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 1Clay	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														



iSeries Access for Web

User: CHINER System: LP126AB.RCHLAND

Run SQL

SQL Statement

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

SQL Wizard

SQL Output

Type: Microsoft Excel 4 (.xls) Settings

Destination: Browser Settings

Format

Date: 12/9/05 Time: 4:32:05 PM

Connection

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

Run SQL Save Request...

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

iSeries Access for Web

Run SQL

SQL Statement

```
SELECT
  *
FROM
  "QGPL"."MYCUST"
```

SQL Output

Type: Portable Document Format (.pdf) Destination: Mail as attachment

Format

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

Connection

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

Related Links:

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

Buttons: Run SQL | Save Request...

iSeries Access for Web

Run SQL Request

From: cminer@us.ibm.com

To:

cc:

bcc:

Subject:

Attachment: sqlOutput.pdf

Buttons: Run | Cancel

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

Series Access for Web

My Folder

Print

Messages

Jobs

5250

Database

Files

Command

Download

Customize

Other

Related Links:

My Home Page

My Folder

[1] Q

Item Status From Date/Time Size Action

Status [SQL output in HTML] Unopened CMINER 12/9/05 4:52 PM 202

SQL output in HTML Unopened CMINER 12/9/05 4:52 PM 816

Status [SQL output in XLS] Unopened CMINER 12/5/05 4:35 PM 297

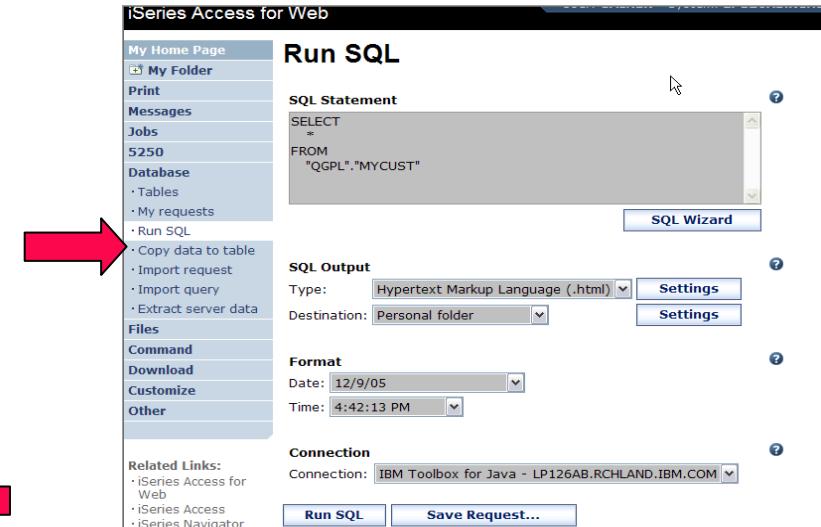
SQL output in XLS Opened CMINER 12/5/05 4:35 PM 3956

Delete Selected Items

[1] Q

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

File
Cor
Dow
Cus
Oth
Rel
· IS
· W
· IS
· IS
· IS



**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**

iSeries Access for Web

Edit SQL Request

SQL Statement

```
SELECT
FROM
"QGPL"."MYCUST"
```

SQL Output

Type: Hypertext Markup Language (.html) Destination: Integrated File System

Format

Date: 12/12/05 Time: 5:27:24 PM

Connection

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

iSeries Access for Web

USER: CMINER SYSTEM: LP126AB.RCHLAND.IBM.COM

My Home Page

- My Folder
- Print
- Messages
- Jobs
- 5250
- Database
- Files
 - Browse files
 - Browse file share
- Download
- Customize
- Other

Directory Contents / CMINER

[Copy Files to Server](#)

Copy files to the current directory.

[Create Directory](#)

Create a subdirectory in the current directory.

Found 0 directories. Found 2 files with a total size of 3,359 bytes.

Name	Size (bytes)	Type	Modified	Action
.. (Parent Directory)				<input type="button"/> <input type="button"/> <input type="button"/> <input type="button"/> <input type="button"/> <input type="button"/> ...
sqOutput.html	816	File	12/12/05 5:35:42 PM	<input type="button"/> <input type="button"/> <input type="button"/> <input type="button"/> <input type="button"/> <input type="button"/> ...
sqOutput.pdf	2543	File	12/12/05 5:38:59 PM	<input type="button"/> <input type="button"/> <input type="button"/> <input type="button"/> <input type="button"/> <input type="button"/> ...

Copy Files to Server

Specify the file to copy to directory /CMINER on LP126AB.RCHLAND.IBM.COM. Data is copied in hi

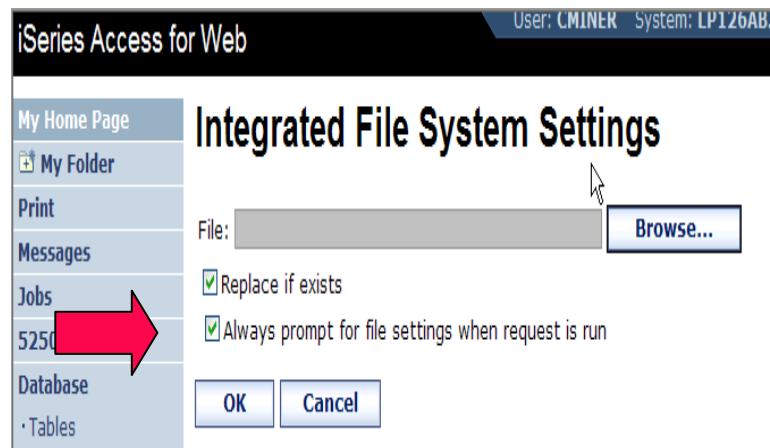
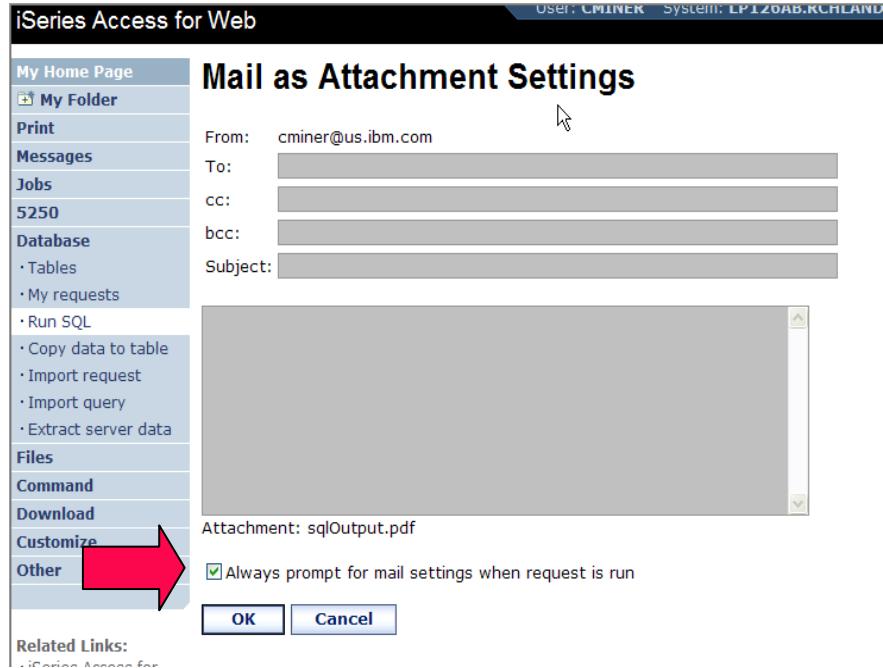
- 4. Click on ‘Files’ tab**
- 5. Open CMINER directory**
- 6. Click on File Name**
- 7. Results shown in HTML**

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



Shortcuts

Give users access to upload/download requests you have created



Shortcuts – working with, managing

**Under “Action” column,
you can:**

- Create shortcuts
- Edit your shortcuts

**At bottom of screen, you
can:**

- Delete shortcuts to
existing users or
groups

The screenshot shows the iSeries Access for Web interface with the title bar "iSeries Access for Web" and the IBM logo. The main content area is titled "My Requests". It displays a table with columns: Request, Description, Action (with icons for Run, Stop, Delete, Copy, Edit), Shortcut, Created By, and Access. The table lists several requests, such as "Boats By Price", "Boats by Price in Excel", and "Find Boat To Buy", along with their descriptions and creation details. Below the table, there are links for "Run SQL", "Copy data to table", and "Shortcuts to requests you created". A red arrow points from the text "Delete shortcuts to existing users or groups" to the "Shortcuts to requests you created" link.

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

Run SQL

Create a new SQL request

Copy data to table

Create a new copy data request

Shortcuts to requests you created

Displays a list of shortcuts to requests you created. Shortcuts can be deleted from this list.

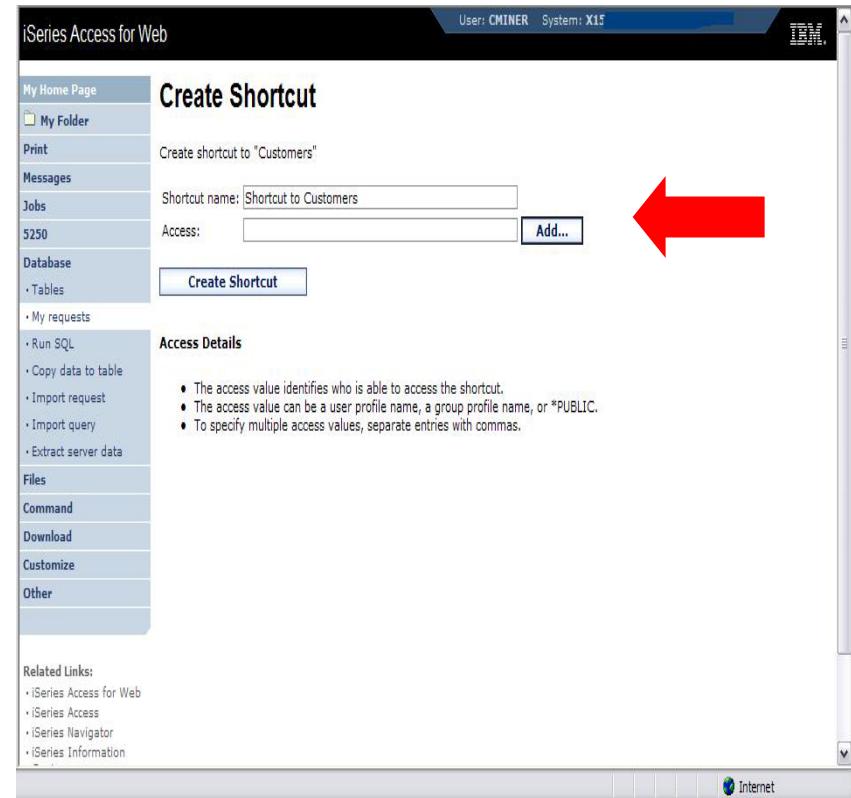
Shortcuts – giving users access

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



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

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

Run SQL
Create a new SQL request

Copy data to table
Create a new copy data request

Shortcuts to requests you created
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 05/17/2007 11:45 AM SYSTEM:EP120AB.RCHTRHTD.IBM.COM IBM.

My Requests

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

Shortcuts

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

Import Requests and Import Queries

iSeries Access fo

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

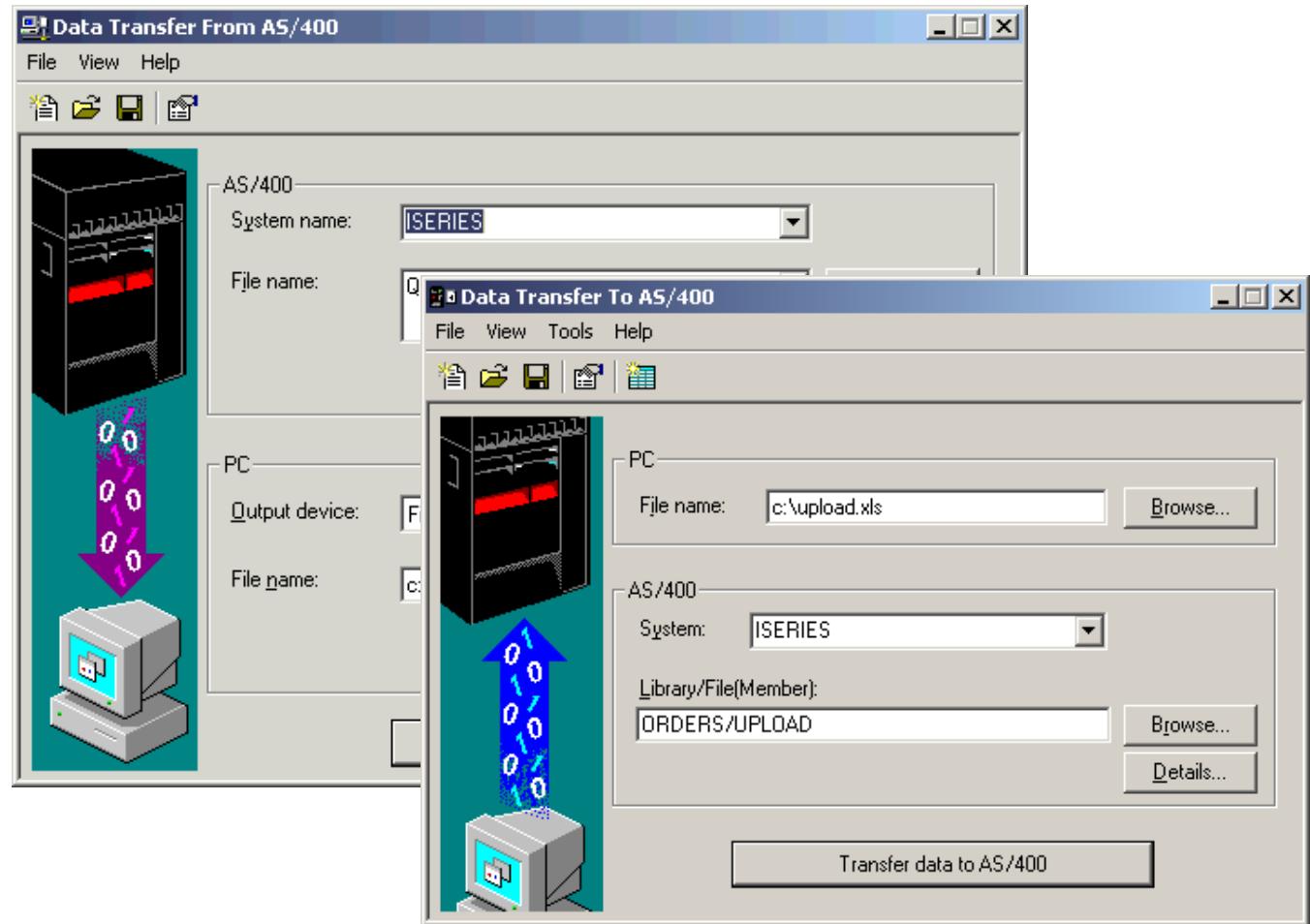
Customize

Other



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 IBM.

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:

Character set:

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.

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)

iSeries Access for Web

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

Import Query

Specify the query file you want to import. The query contained in the query file will be converted to an iSeries Access for Web database request.

Note: The converted iSeries Access for Web database request could work differently than the original query file. Verifying the converted request is strongly recommended.

Query to Import

Query file: Find...

Query type: DB2 UDB for iSeries Query Manager (*QMQRY)

Query file CCSID: Query for iSeries (*QRYDFN)
DB2 UDB for iSeries Query Manager (*QMQRY)

Import Query

Import Details

Query files of types *QMQRY and *QRYDFN are supported. These query files are created by Query for iSeries and DB2 UDB for iSeries Query Manager. Queries of type form, queries of type procedure, and prompted queries, are not supported. Queries containing program variables or replacement variables are also not supported.

Related Links:

- iSeries Access for Web
- iSeries Access

***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.

iSeries Access for Web

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

Extract Server Object Data

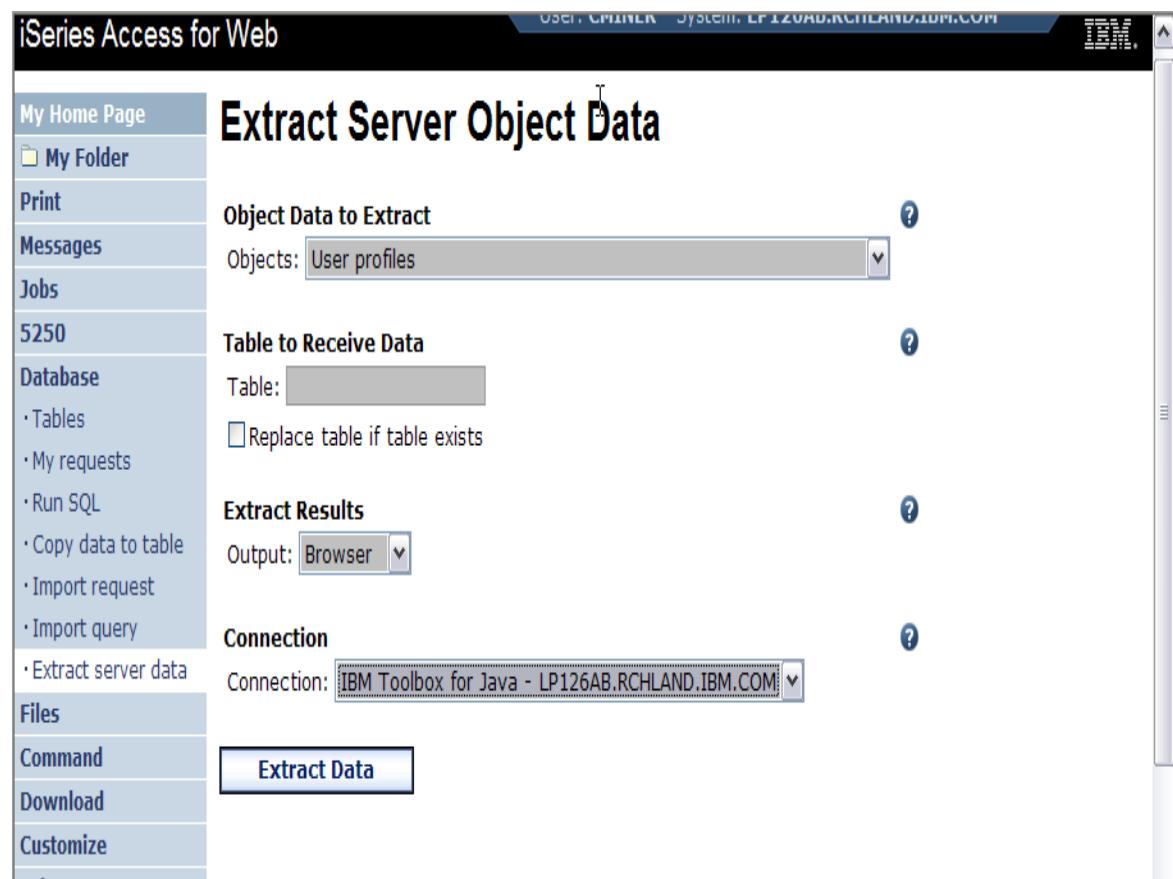
Object Data to Extract
Objects: User profiles

Table to Receive Data
Table:
 Replace table if table exists

Extract Results
Output: Browser

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

Extract Data



Extract Server Data

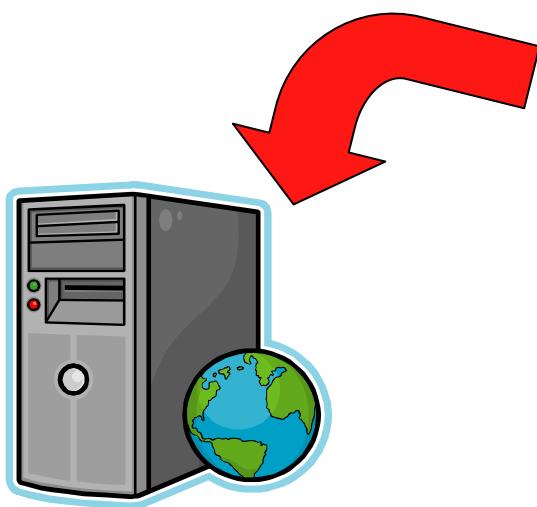


Extract Server Data can be used to retrieve information about objects on the iSeries server, and then store the results in a database table

- General object information can be retrieved for any iSeries 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 in the IFS
 - 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 iSeries information in any manner that is of importance to you.

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



Tables – work with iSeries database information

iSeries Access for Web		User: CHARTER System: RCHLAND																												
		Tables																												
		Connection: IBM Toolbox for Java - LP126AB.RCHLAND.IBM.COM																												
		Table filter: *USRLIBL, boats																												
		[<] [<<] [<] [1] [<u>2</u>] [<u>3</u>] [<u>4</u>] [<u>5</u>] [<u>6</u>] [<u>7</u>] [<u>8</u>] [<u>9</u>] [>] [>>] [?]																												
Database		<table border="1"> <thead> <tr> <th>Table</th><th>Description</th><th>Action</th></tr> </thead> <tbody> <tr> <td>BOATS.BOATS</td><td>Available BOATS</td><td> </td></tr> <tr> <td>BOATS.BOATS1</td><td>Available boats by length</td><td> </td></tr> <tr> <td>BOATS.PCFILES</td><td>PC files needed by BOATS WSG Demo</td><td> </td></tr> <tr> <td>BOATS.QCLSRC</td><td></td><td> </td></tr> <tr> <td>BOATS.QCMDSRC</td><td></td><td> </td></tr> <tr> <td>BOATS.QDDSSRC</td><td></td><td> </td></tr> <tr> <td>BOATS.QRNCTVLG</td><td></td><td> </td></tr> </tbody> </table>					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.QRNCTVLG		
Table	Description	Action																												
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BOATS.QCMDSRC																														
BOATS.QDDSSRC																														
BOATS.QRNCTVLG																														
· Tables																														
· My requests																														
· Run SQL																														
· Copy data to table																														
· Import request																														
· Import query																														
· Extract server data																														



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

Working with Tables

iSeries Access for Web

Tables

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

Table Actions

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.QRNCVTLG		
BOATS.QRPGLESRC		
BOATS.QRPGSRC		
QGPL.#	\$	
QGPL.BITYPES		
QGPL.CHADDEC		
QGPL.CONCURTYPE		
QGPL.CPY_INFO		
QGPL.DAVE		
QGPL.DECSEP		
QGPL.DIVZERO		
QGPL.DIVZERO2		
QGPL.DSD		
QGPL.DSPSFWRSC	Output file for DSPSFWRSC	
QGPL.FMD_WSC		

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.

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

The screenshot shows a web-based interface for IBM iSeries Access. The left sidebar contains a navigation menu with links like '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', and 'Command'. The main content area is titled 'Find Record' and displays a table of search results. The table has columns: Action, BTTYPE, BNAME, BFEET, BYEAR, BCOST, BNT01, BNT02, BNT03, BNT04, and BNT05. There are two rows of data:

Action	BTTYPE	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.	- Owner 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

Tables → Update Function

1

iSeries Access for Web

Select Records to Update

Specify column values, to select which records you want to update. [?](#)

	Column	Type	Value	Description
5250	BTYPE	CHAR(1)		P=Powered S=Sailing
Database	BNAME	CHAR(30)		boat name
• Tables	BFEET	NUMERIC(3,0)	80	Length in feet
• My requests	BYEAR	NUMERIC(4,0)		Year built
• Run SQL	BCOST	NUMERIC(9,0)		Price in US\$
• Copy data to table	BNT01	CHAR(72)		Note 1
• Import request	BNT02	CHAR(72)		Note 2
• Import query				
• Extract server data				

**Wildcards
may be used
in the
selection**

2

iSeries Access for Web

Records to Update

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

3

iSeries Access for Web

Update Record

To update the record, change column values and click Update Record. [?](#)

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

Inserting New Records into A Table

The diagram illustrates the process of inserting a new record into a table. It consists of three yellow boxes with arrows pointing to the right, corresponding to the fields in the 'Insert Record' form:

- Column Name**: Points to the 'Column' header in the table.
- Column Type & Length**: Points to the 'Type' header in the table.
- Enter values for each column**: Points to the 'Value' column in the table.

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

Insert Record

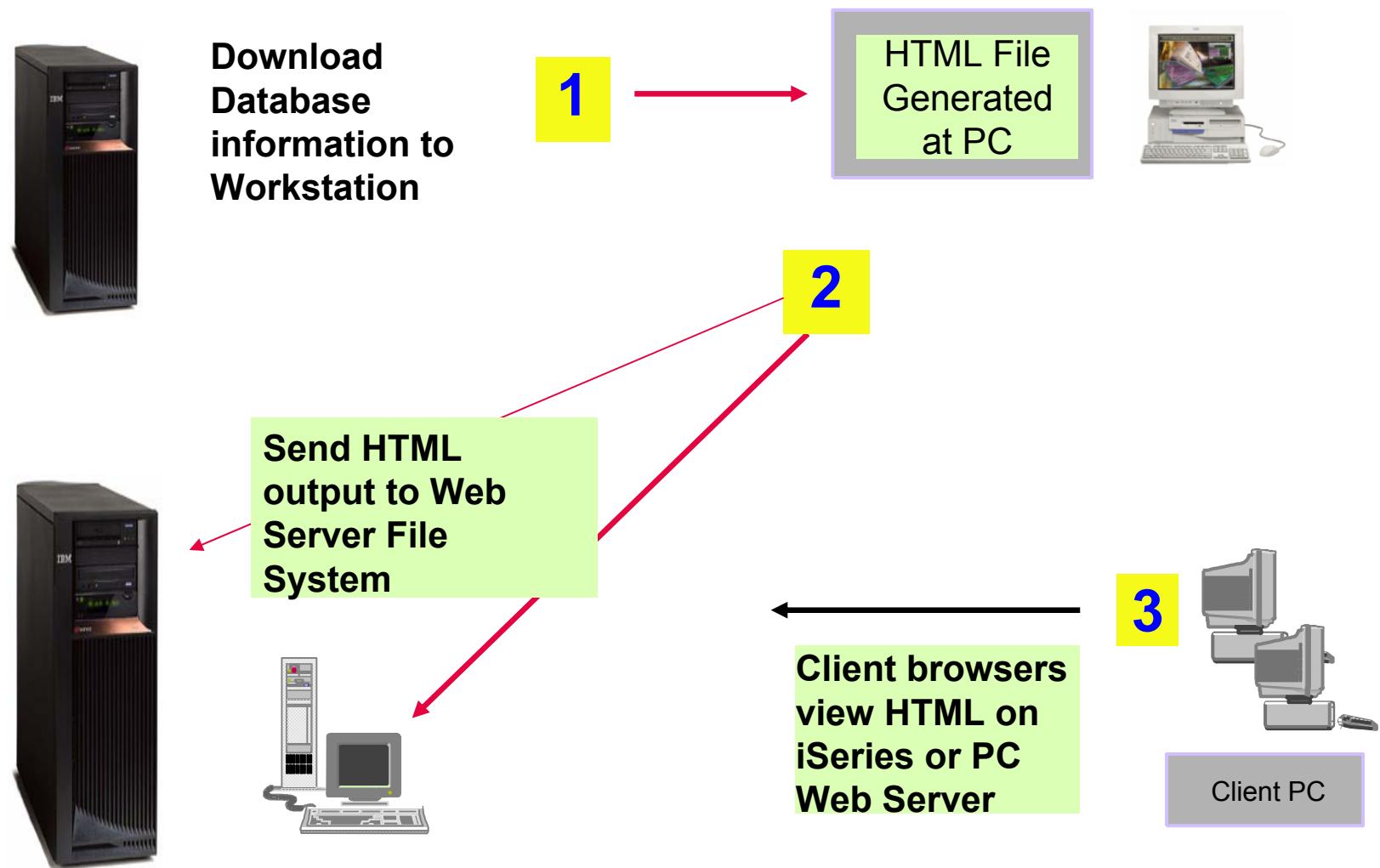
To insert a record, specify column values and click Insert Record. [?](#)

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

Caption

Text:

Alignment:

Font size:

Style: Bold Italic Fixed width Underline

Table

Alignment:

Rows per table:

Table width: % of window

Border width: pixels

Cell spacing between cells: pixels

Cell padding within cells: pixels

Cell data:

Include column headings

Related Links:

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

Template

File:

Tag: <!-- TABLE1 -->

General

Character set:

Displaying output in a paged list

iSeries Access for Web (continued)

The screenshot shows the 'Customize' section of the iSeries Access for Web interface. On the left, a sidebar lists various options: Run SQL, Copy data to table, Import request, Import query, Extract server data, Files, Command, Download, Customize, and Other. The 'Customize' option is selected. On the right, under the 'Table' heading, there are several input fields and buttons:

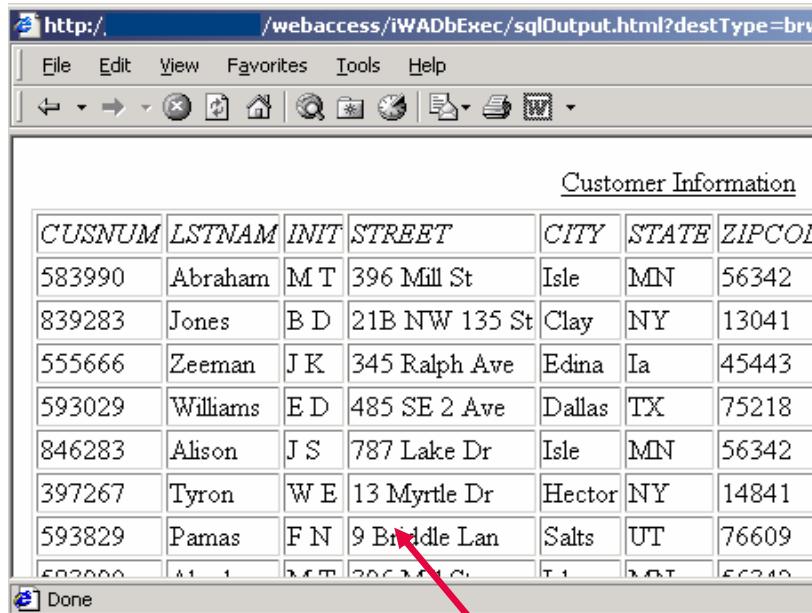
- Alignment:** A dropdown menu set to "Browser default".
- Rows per table:** An input field containing the value "15".
- Table width:** An input field.
- Border width:** An input field.
- Cell spacing between cells:** An input field.
- Cell padding within cells:** An input field.
- Cell data:** A button labeled "Data Settings".
- Include column headings:** A checked checkbox next to a button labeled "Heading Settings".

The screenshot shows the 'SQL Output' page of iSeries Access for Web. The title bar reads "iSeries Access for Web" and "SQL Output". The main content area displays a table of boat data with the following columns: BCOST, BTYPE, BNAME, BFEE, and BYEAR. The table contains 20 rows of data. Navigation buttons at the top of the table allow for page navigation. The left sidebar mirrors the 'Customize' section from the previous screenshot, with the 'Customize' option selected.

BCOST	BTYPE	BNAME	BFEE	BYEAR
2975000	P	Monterey Marine Custom	80	1996
1588000	P	Fairline Squadron	58	2005
1000000	P	Poole Boat Co Aluminum	80	1979
750000	P	Spandau Houseboat	720	1995
450000	S	Merlin's Magic	54	1990
450000	P	Seacamper 795 Houseboat	72	2000
269500	S	Seafinn 411 Motorsailer Ketch	41	1989
249000	P	Miki Miki Original Tug	126	1944
185000	P	Bavaria 50 Yacht	50	2000
179500	S	Fountaine 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

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

Contrasting other layouts

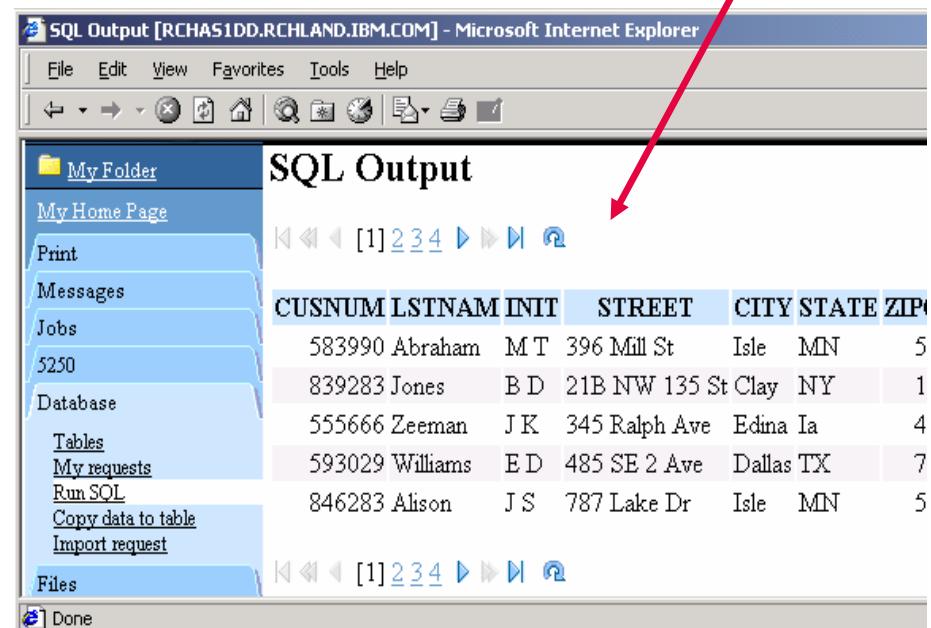


A screenshot of a web browser window titled "http:// /webaccess/iWADbExec/sqlOutput.html?destType=brw". The browser has a standard menu bar (File, Edit, View, Favorites, Tools, Help) and toolbar. The main content area displays a table titled "Customer Information" with columns: CUSNUM, LSTNAM, INIT, STREET, CITY, STATE, ZIPCOL. The table contains 10 rows of customer data. A red arrow points from the text below to the bottom right corner of the table.

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 Briddle Lan	Salts	UT	76609
502000						

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



A screenshot of a web browser window titled "SQL Output [RCHAS1DD.RCHLAND.IBM.COM] - Microsoft Internet Explorer". The browser has a standard menu bar (File, Edit, View, Favorites, Tools, Help) and toolbar. On the left is a sidebar with links: My Folder, My Home Page, Print, Messages, Jobs, 5250, Database, Tables, My requests, Run SQL, Copy data to table, Import request, and Files. The main content area is titled "SQL Output" and shows a table with the same "Customer Information" data as the first screenshot. The table has 10 rows. Above the table are navigation buttons: back, forward, search, and a page number indicator [1] 2 3 4. Below the table are more navigation buttons. A red arrow points from the text above to the page number indicator.

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 windows side-by-side. The top window is titled 'HTML Output Settings' and is running in Microsoft Internet Explorer. It displays configuration options for a template file:

- Template**:
 - File: /boats/homepage/accesswater.html
 - Tag: %%CONTENT%%
- General**:
 - Character set: Multilingual [UTF-8]
 - Maximum rows: [empty input field]

A red oval highlights the 'Template' section. The bottom window shows a sample web page titled 'Access for Water Supplying quality boats since 2002'. The page features an IBM logo, a boat image, and a table of boat details:

BNAME	BFEEET	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.

The page includes navigation links for IBM, iSeries, and Service, and a footer with 'Done' and 'Internet' buttons.

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



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) 	Yes Yes	Yes No (can send to PC printer by selecting 'Print' as output device)
<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 	Yes Yes No No No Yes No Yes No No	Yes Yes Yes Yes Yes Yes Yes Yes No Yes

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 	Yes Yes Yes No Yes	Yes Yes No Yes No
<ul style="list-style-type: none"> • Wizards to upload PC data to iSeries DB2 • Support for Source Physical Files 	Yes Yes (sequence and data generated on uploads is not returned by default)	Yes No (treated the same as other Table Values)
<ul style="list-style-type: none"> • Upload data directly from Excel • Excel dates/times handled as dates/times 	Yes Yes	No No, handled as character strings
<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) 	Yes Yes No, put on shared drive Yes (RTOPCB, RFROMPCB) No	Yes No Yes, via Shortcuts No Yes (except for Browser option)

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.