



Deep Dive Into System i Access for Web Session 4:

Database, Security, Tips

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Part 1: Database

System i Access for Web – Database Functions

Access database tables with System i Access for Web.

Tables

- View a list of database tables on your target system.
- 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.
- Display the contents of a table record using the Find record action.
- 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 target system.
- 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 System i Access for Web copy data and SQL requests.
- Imported requests are automatically converted to System i Access for Web format.
- Run and edit converted requests just like other copy data and SQL requests.

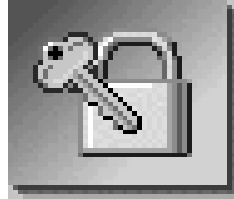
Import query

- Import queries generated by Query for i5/OS and DB2 for i5/OS Query Manager.
- Imported queries can be saved into System i Access for Web database requests.
- Run and edit converted queries just like other System i Access for Web SQL requests.

Extract i5/OS data

- Extract i5/OS object information into a database table.

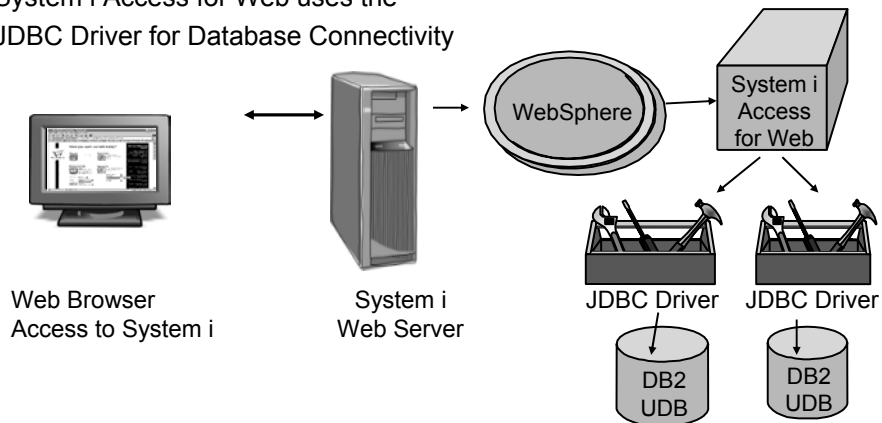
Database-related Security and Administration



Database Overview

System i Access for Web

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

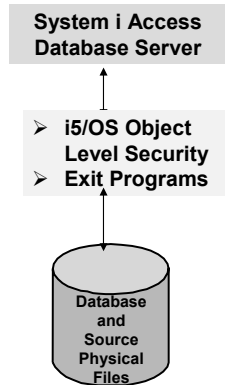


Security – Access to DB2 for i5/OS

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 system, 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/series/v5r2/ic2924/index.htm?info/sqlp/rbafymst324.htm>



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

My Home Page

- My Folder
- Print
- Messages
- Jobs
- 5250
- Database
- Files
- Command
- Download
- Customize
- Preferences
- Policies
- Settings
- Transfer configuration
- Other

Related Links:

- System i Access for Web
- System i Access
- System i Navigator
- i5/OS Information Center
- System i Resource Center

Policies

Profile: JHANSEN

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

[Change category access](#)
Change category access policies for this profile.

Many policies that can be set for 'Database' functions

Edit Policies - Database

Profile: JHANSEN

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	*USALLBL
Table filter in 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
Find record columns	Shipped default	Use current setting	Columns...
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
Create automated task	Shipped default	Use current setting	Allow
Transfer request	Shipped default	Use current setting	Allow
Edit request	Shipped default	Use current setting	Allow
Save request	Shipped default	Use current setting	Allow
Import requests	Shipped default	Use current setting	Allow
Export requests	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
Import query	Shipped default	Use current setting	Allow
Export i3OS object data	Shipped default	Use current setting	IBM Toolbox for Java
Default connection	Shipped default	Use current setting	IBM Toolbox for Java - .ibm.com
Default connection is user preference	Shipped default	Use current setting	Allow
Add IBM Toolbox for Java to connection list	Shipped default	Use current setting	allow



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 *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



My Home Page

My Folder

Print

5250

Database

My requests

Files

Download

Related Links:

- System i Access for Web
- System i Access
- System i Navigator
- IS/OS Information

My Requests

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Request	Description	Action	Shortcut	Owner	Access
Shortcut to Boats for Sale	View all available boats		Yes	jansen	stymie
Shortcut to Find Boat to Buy	Select type and price limits		Yes	jansen	*PUBLIC
Shortcut to My Customer Mailing	Mail customer list		Yes	jansen	stymie
Shortcut to My Customer Mailing	Mail customer list		Yes	jansen	*PUBLIC
Shortcut to Put My Customer List in Folder	Store customer list		Yes	jansen	stymie

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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

SQL Output

BCOST	BYEAR	BTYPE	BNAME	BFEET	BNT01
10000000	1940	A	Hangar	20	
10000000	2000	A	Spandau1	72	
10000000	1999	A	MOLSLINEN	300	
10000000	1999	A	Spandau	720	
10000000	1995	P	Katamenan	200	
2975000	1996	P	Monterey Marine Custom	80	-Located in Stuart, FL
1000000	1979	C	Boyle Boat Co Aluminum	80	-Located in S. Diego, CA
450000	1990	S	Merlin's Magic	54	-Designed by Dutch naval architect Ernst Van Derzan.
269000	1989	S	Seafinn 411	41	-Silver encolised spars by Selden of Sweden. Main and
249000	1944	T	MKI MKI Original Tug	126	-Located in Seattle, WA.
179000	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	-rather Shue design ketch built by Shannon Boat Co. Inc.
149000	1985	S	Brandmayr 48	48	-"In 8" aluminum extrusion, oval mast and 3/5" galvanized.
80000	1974	S	Garden Design Porpoise Ketch	51	-The hull is carvel planked teak.
69900	1994	S	Conser 27	27	-Equipped for cruising and racing.
69000	1978	S	Morgan 382	38	-Has an Airex hull and sing rudder. Has been rated by Livy's
63000	1979	S	Mariner Ketch	33	-Full keel and the rudder is keel hung
57900	1990	S	Hunter 33.5	40	-The boat has a large wheel steering a spade rudder.
55000	1985	P	Monk Flybridge/Sedan	34	-Double planked cedar on oak frames.
27500	1983	S	Bill Garden Schooner	36	-The hull is 1/8" carvel cedar planked atop 1 1/4" x 1 1/2" oak frames
23900	1978	P	Carver Santa Cruz	28	-Constructed of fiberglass.
19900	1956	P	Monk Bridgedeck Cruiser	36	-Built of mahogany, oak, and cedar.
13000	1989	P	Mako Sportfisher	19	-Located in Anacortes, WA.

Dynamic Query

Example has 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

Find Boat

Select Boat Type

P Power
 A All
 C Cruiser
 D Dayboat
 S Sailing
 T Tugboat

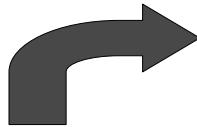
Min US\$ greater than or equal to:

Max US\$ less than or equal to:

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.

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

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 - Import query
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- Download
- Customize
- Other

Copy Data to Table

File to Copy

File:

File type: Comma Separated Value (.csv)

Table to Receive Data

Table:

Action:

Connection

Connection: IBM Toolbox for Java - .IBM.COM

Database help
View help for copying file data to a database table.

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

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Copy Data to Table

Table JHANSEN.BOATS does not exist.

Create options

- View or change column definitions before creating table
- Create table using the source file's column definitions

OK Cancel

[Database help](#)

View help for copying file data to a database table.

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

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- Other

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
STYVE		CHAR	1	0	T
ENAME		CHAR	29	0	M&I M&I Original Tug
SFEET		NUMERIC	3	0	126
BYEAR		NUMERIC	4	0	1944
BCOST		NUMERIC	9	0	249000
ENT01		CHAR	71	0	-Located in Seattle, WA.
ENT02		CHAR	66	0	-The "FLORENCE FLEBERG" is an all-wood, single deck raised forward
ENT03		CHAR	68	0	-Four all-wood M&I class tug with sharp stem, molded hull and
ENT04		CHAR	64	0	-elliptical stem. Decks have a pronounced sheer forward and the
ENT05		CHAR	69	0	-deckhouse is located amidships with two search and related gear
ENT06		CHAR	72	0	-60kw generators.
ENT07		CHAR	72	0	- 7.91 survey s&v.
ENT08		CHAR	70	0	"As a motor yacht, she is massively stronger than any conventional
ENT09		CHAR	70	0	yacht requirements and, therefore, with optional upgrading and
ENT10		CHAR	63	0	proper maintenance, the vessel should exceed its longevity as a
ENT11		CHAR	70	0	working vessel."
ENT12		CHAR	62	0	
ENT13		CHAR	65	0	
ENT14		CHAR	62	0	
ENT15		CHAR	49	0	
BHTM6		CHAR	12	0	M&I&M&I.jpg
BHTM1		CHAR	0	0	
BHTM2		CHAR	0	0	

Create Table Cancel

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
 - SVG (V6R1)
 - ...

Run SQL

SQL Statement ?

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

SQL Output ?

Type:

Destination:

Format ?

Date:

Time:

Connection ?

Connection:

SQL Output Type Enhancements (V6R1)

- New output types
 - Scalable Vector Graphics Chart (.svg)
 - Language for describing 2D graphics in XML
 - W3C standard
 - Text – Delimited (.txt)
- Excel output types support Excel date/time formats
- Decimal floating point columns (DECFLOAT)

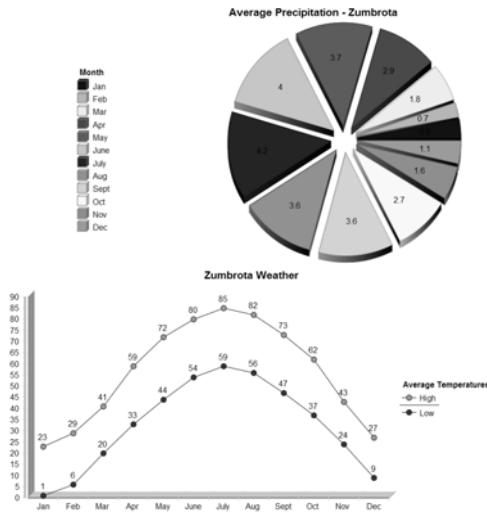
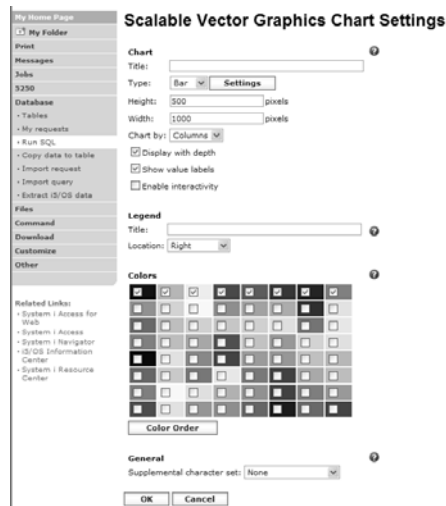
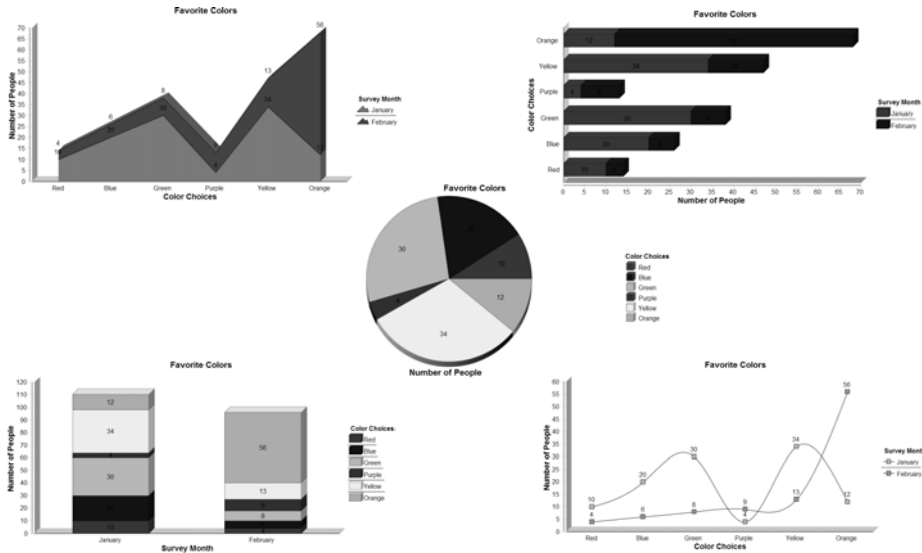


Chart Settings

- Many configuration settings
 - Chart type
 - Area, Bar, Line, Pie
 - Chart type settings
 - Area – curved areas, ...
 - Bar – vertical or horizontal, ...
 - Line – marker shape, ...
 - Pie – exploded pie, ...
 - Size
 - Legend location
 - Colors
- Same destination options
 - Browser, e-mail, file system, personal folder



Example Charts



The SQL Wizard

The SQL Wizard helps you generate a SELECT statement

V6R1 includes support for joining tables

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SQL Wizard

SELECT
FROM

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Welcome

This wizard steps you through creating an SQL select statement.

Identify the DB2 for i5/OS database table

Step 1:

Choose a table

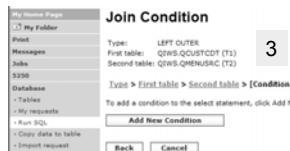
Type in a table filter to help narrow your search. Many schemas (libraries) may be specified by putting them in a comma separated list

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



Joining Multiple Tables

- Select multiple tables
- Select the join type
- Optionally add conditions



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

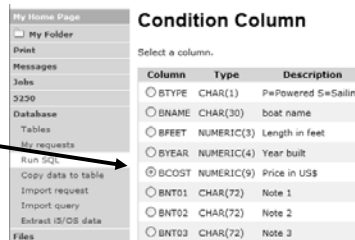
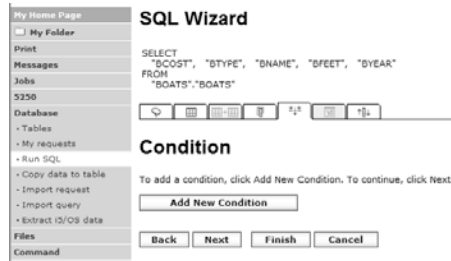


Specify Conditions

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 statement and in a condition list. You may edit or delete the condition.
- You may also add additional conditions.

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

Condition Value Option

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

Operator: Less than

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.

Back Next Apply 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

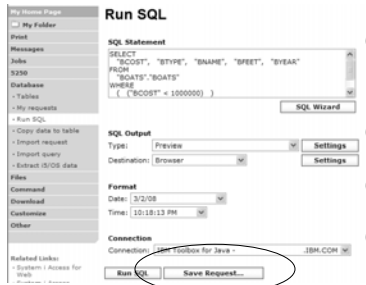
Can find values in table

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

Save the SQL Request

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



Can Run it now

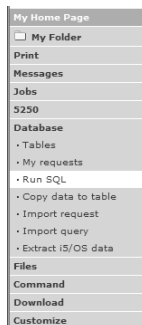
Or

Run it later from “My Requests”



Dynamic Query – condition value

Select to prompt for values when the request is run



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.

Back Next Apply Cancel

Chose Operator and Prompt Type

- Choose a comparison operator just like we did in the static query example

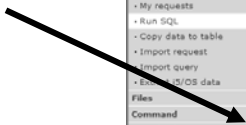
- Select how the user will be prompted for the values

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

Can Include Multiple Conditions on Dynamic SQL Requests

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



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SQL Wizard

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

Action	Condition	Prompt Label	Prompt Text	Prompt Option
<input checked="" type="checkbox"/>	("BCOST" <= ?)	Boat Cost Upper Limit	Enter value	

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

Dynamic query – wizard warning

- Dynamic queries generated by the wizard can only be modified using the wizard

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Run SQL

Copy data to table

SQL Wizard completed successfully.

Note: Use the SQL wizard to make additional updates to the SQL statement; if updates are made outside the wizard, the SQL wizard can no longer be used with the updated statement. Also, all prompt information is lost and the request might not run successfully.

- 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

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Edit SQL Request

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

SQL Output

Type:

Destination:

Format

Date:

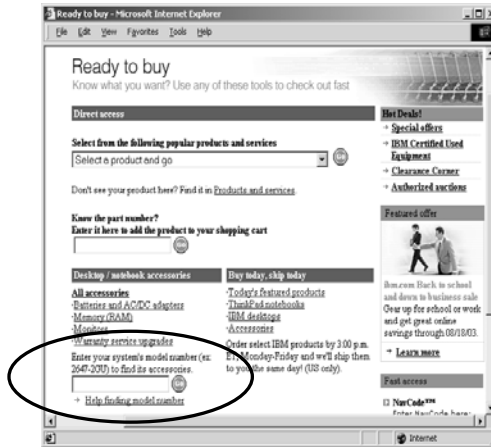
Time:

Connection

Connection:

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/iW ADbExec" 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

Run SQL – Output Browser

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

A1	CUSTNAM											
A	B	C	D	E	F	G	H	I	J	K	L	
1	000223	STHAM	RET	STREET	CITY	STATE	ZIPCOD	CDLMT	CHGCOO	BALDIE	CDTQSE	
2	335872	Henning	G K	4859 Elm	Dallas	TX	75217	5000	3	37	0	
3	839283	Jones	B D	2188 Hwy 1	Clay	NY	13041	400	1	100	0	
4	702993	Wine	S S	PO Box 78	Benning	VT	5565	700	1	439	0	
5	938485	Johnson	J A	3 Alpine W	Helen	GA	30545	9999	2	3987	5	33
6	397567	Tyler	W E	13 Myrtle	Hector	NY	14841	5000	1	0	0	
7	385972	Stevens	K L	208 Stone	Denver	CO	80295	400	1	58	75	1
8	845283	Alison	J S	787 Lake	Isle	MN	56342	5000	3	10	0	
9	470538	One	J W	59 Anchor	Santer	CA	95665	700	2	500	100	
10	693829	Thomas	A H	3 Drive	Con-Casper	WY	82509	9999	2	0	0	
11	993029	Williams	E D	1485 SE 2	Dallas	TX	75218	200	1	20	0	
12	182837	Lee	F L	5963 Oak	Hector	NY	14841	700	2	489	5	0
13	583996	Abraham	M T	392 Mill	Denver	MN	56342	9999	3	600	0	
14												

Browser sees the .xls format type, starts Excel, and displays the 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
-
- Click on My Folder link
 - Select 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 '/JHANSEN' directory
4. Click on 'Files' tab
5. Open JHANSEN directory
6. Click on file name
7. Results shown in HTML

Destination Settings

You can specify the folder, mail, and integrated file system settings before the request is run

Or you can wait until the request is run



My Requests

Other ways to manage and use database requests

Export Database Requests (V6R1)

- Save System i Access for Web requests to a file
 - Move requests to another system
 - myDBRequests.requests
- Only requests can be exported
 - Shortcuts can not be export
- Connection information is not exported with the request
 - Same connections may not be available when importing

My Requests

Request	Description	Action	Shortcut	Owner	Access
Builds for Sale	View all available builds	[Icons]	No	Janssen	Janssen
Customers	Dynamic query example	[Icons]	No	Janssen	Janssen
Find a Build	Select type and price limits	[Icons]	No	Janssen	Janssen
Find Build to Buy	Select type and price limits	[Icons]	No	Janssen	Janssen
My Customer Meeting	Mail customer list	[Icons]	No	Janssen	Janssen
Ask the Customer List in Folder	Store customer list	[Icons]	No	Janssen	Janssen
Shortcut to Find Build to Buy	Select type and price limits	[Icons]	Yes	Janssen	PUBLIC
Shortcut to My Customer Meeting	Mail customer list	[Icons]	Yes	Janssen	PUBLIC
askAll_public	askAll All Builds	[Icons]	Yes	public	PUBLIC

Related tasks:
 Create a new SQL request
 Copy data to table
 Create a new copy data request
 Export database requests from System i Access for Web

Export Database Requests

Select requests to export:

Select	Request	Description
<input type="checkbox"/>	Customers	View all available builds
<input type="checkbox"/>	Builds for Sale	View all available builds
<input type="checkbox"/>	Find Build to Buy	Select type and price limits
<input checked="" type="checkbox"/>	My Customer Meeting	Mail customer list
<input type="checkbox"/>	Ask the Customer List in Folder	Store customer list
<input type="checkbox"/>	Builds for Sale Than \$1,000,000	Select type and price limits
<input type="checkbox"/>	Find a Build	Dynamic query example

Export Requests Select All Deselect All

Import Database Requests (V6R1)

- Import System i Access for Web database requests from a file
 - Move requests to another system
- Default connection is associated with imported requests
 - Can specify other connection
 - Important to select a connection appropriate for the request so that it will work properly



Transfer Requests to a Group (V6R1)

- Transfer requests
 - Transfer to a group (must be a group member)
 - Group members can manage request
 - Group members can transfer requests to themselves



Create Task to Run Request (V6R1)

- Create automated task
 - Create Java archive (.jar) that will run request or shortcut
 - Only static queries (not dynamic)
 - Run anywhere that has java and network access
 - Can be scheduled

Request	Description	Active	Shortcut	Owner	Access
Boats for Less Than \$1,000,000			No	Parsons	Parsons
Boats for Sale	View all available boats		No	Parsons	Parsons
customers			No	Parsons	Parsons
Find a Boat	Dynamic query example		No	Parsons	Parsons
Find Boat to Buy	Select type and price limits		No	Parsons	Parsons
Find Customer Rating	Find customer list		No	Parsons	Parsons
Put My Customer List in Folder	Store customer list		No	Parsons	Parsons
Shortcut to Find Boat to Buy	Select type and price limits		Yes	Parsons	*PUBLIC
Shortcut to My Customer Rating	Find customer list		Yes	Parsons	*PUBLIC
wait_public	wait All Boats		Yes	waitadmin	*PUBLIC

Create Automated Task

Request: customers
 User profile: parsons
 Password: []
 Confirm password: []
 Output file: getOutput.txt
 Java archive: getTask.jar

Create Automated Task

Automated task created successfully.

```

C:\Documents and Settings\Administrator\My Documents>java -jar CustomerTask.jar
C:\Documents and Settings\Administrator\My Documents>
    
```

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

My Requests

Request ID	Description	Action	Shortcut	Owner	Access
Boats for Less Than \$1,000,000		[Icons]	No	jansen	jansen
Boats for Sale	View all available boats	[Icons]	No	jansen	jansen
customers		[Icons]	No	jansen	jansen
Find a Boat	Dynamic query example	[Icons]	No	jansen	jansen
Find Boat to Buy	Select type and price limits	[Icons]	No	jansen	jansen
My Customer Mailing	Mail customer list	[Icons]	No	jansen	jansen
Put My Customer List in Folder	Store customer list	[Icons]	No	jansen	jansen
Shortcut to Find Boat to Buy	Select type and price limits	[Icons]	Yes	jansen	*PUBLIC
Shortcut to My Customer Mailing	Mail customer list	[Icons]	Yes	jansen	*PUBLIC

Run SQL
Create a new SQL request

Copy data to table
Create a new copy data request

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

Import database requests
Import requests from a file to System i Access for Web.

Export database requests
Export requests from System i Access for Web to a file.

Database help
View help for working with database requests.

Shortcuts – giving users access

Under “Actions” select Create Shortcuts.

Click Add... 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

Create Shortcut

Create shortcut to "customers"

Shortcut name:

Access:

[Database help](#)
View help for creating a shortcut.

Set Policies for Requests/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

Shortcut indicator

Request	Description	Action	Shortcut	Owner	Access
Boats for Less Than \$1,000,000	View all available boats	[Action icons]	No	jhanzen	jhanzen
Boats for Sale	View all available boats	[Action icons]	No	jhanzen	jhanzen
customers		[Action icons]	No	jhanzen	jhanzen
Find a Boat	Dynamic query example	[Action icons]	No	jhanzen	jhanzen
Find Boat to Buy	Select type and price limites	[Action icons]	No	jhanzen	jhanzen
My Customer Mailing	Mail customer list	[Action icons]	No	jhanzen	jhanzen
Put My Customer List in Folder	Store customer list	[Action icons]	No	jhanzen	jhanzen
Shortcut to Find Boat to Buy	Select type and price limites	[Action icons]	Yes	jhanzen	*PUBLIC
Shortcut to My Customer Mailing	Mail customer list	[Action icons]	Yes	jhanzen	*PUBLIC

User can only run shortcuts previously built by someone else

Request	Description	Action	Shortcut	Owner	Access
Shortcut to Boats for Sale	View all available boats	[Action icons]	Yes	jhanzen	stymie
Shortcut to Find Boat to Buy	Select type and price limites	[Action icons]	Yes	jhanzen	*PUBLIC
Shortcut to My Customer Mailing	Mail customer list	[Action icons]	Yes	jhanzen	stymie
Shortcut to My Customer Mailing	Mail customer list	[Action icons]	Yes	jhanzen	*PUBLIC
Shortcut to Put My Customer List in Folder	Store customer list	[Action icons]	Yes	jhanzen	stymie

[Run SQL](#)
Create a new SQL request

[Shortcuts to requests you manage](#)
Displays a list of shortcuts to requests you manage. Shortcuts can be deleted from this list.

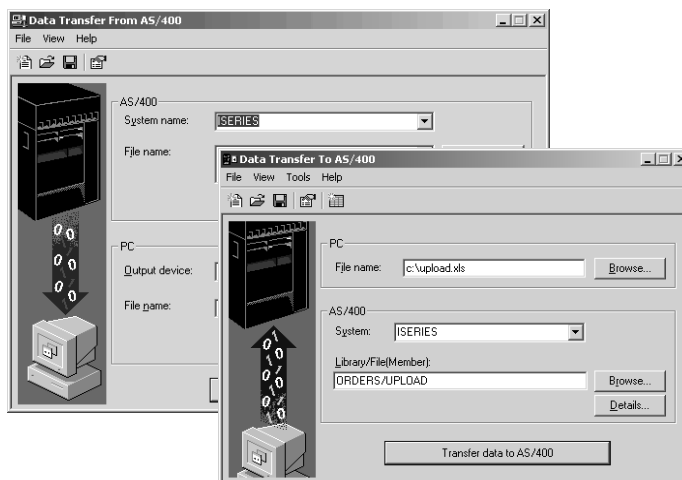
[Database help](#)
View help for working with database requests.

Import Requests and Import Queries



Importing Client Access Data Transfer Requests

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



Import Function

- Don't lose your investment in existing Data Transfer requests
- Import them into System i Access for Web
- The imported transfer request may be run or saved as a System i Access for Web request
- Then users can run them from their browsers!

Import Query Requests

- Bring your existing queries to a browser environment
- Use the Import Query tool to bring them into System i Access for Web
 - IBM Query for i5/OS (5761-QU1)
 - DB2 for i5/OS Query Manager (5761-ST1)

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

Extract i5/OS Data

System i Access for V

- My Home Page
- My Folder
- Print
- Messages
- Jobs
- 5250
- Database
 - Tables
 - My requests
 - Run SQL
 - Copy data to table
 - Import request
 - Import query
 - Extract i5/OS data
- Files
- Command
- Download
- Customize
- Other



Extract i5/OS Object Data

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

- My Home Page
- My Folder
- Print
- Messages
- Jobs
- 5250
- Database
 - Tables
 - My requests
 - Run SQL
 - Copy data to table
 - Import request
 - Import query
 - Extract i5/OS data
- Files
- Command
- Download
- Customize
- Other

Extract i5/OS Object Data

Object Data to Extract ?
 Objects: Directory entries v

Table to Receive Data ?
 Table:

Replace table if table exists

Extract Results ?
 Output: Browser v

Connection ?
 Connection: IBM Toolbox for Java - .IBM.COM v

Extract Data

[Database help](#)
 View help for extracting i5/OS data and storing it in a database table.

Extract i5/OS Object Data



Extract i5/OS Object 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

My Home Page
My Folder
Print
Messages
Jobs
5250
Database
Tables

Connection: IBM Toolbox for Java - .IBM.COM
Table filter: *USRLIBL, BOATS

Page 1 of 11 | Jump to page: 1 | Total: 262

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]

- Insert
- Update
- Quick View
- Find Record
- Run SQL
- Copy Data to Table

Action ?

[Icons for Insert, Update, Quick View, Find Record, Run SQL, Copy Data to Table]

Working with Tables

My Home Page
My Folder
Print
Messages
Jobs
5250
Database
Tables

Connection: IBM Toolbox for Java - .IBM.COM
Table filter: *USRLIBL, BOATS

Page 1 of 11 | Jump to page: 1 | Total: 262

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]
QBLDSYS.CBVTBATS	BVT test case file	[Icons]
QBLDSYS.CBVTQCRY	BVT test case file	[Icons]
QBLDSYS.CBVTDERI	BVT test case file	[Icons]
QBLDSYS.CBVTDLO	BVT test case file	[Icons]
QBLDSYS.CBVTFORM	BVT test case file	[Icons]
QBLDSYS.CBVTGRPD	BVT test case file	[Icons]
QBLDSYS.CBVTGRPS	BVT test case file	[Icons]
QBLDSYS.CBVTJOB	BVT test case file	[Icons]
QBLDSYS.CBVTJOIN	BVT test case file	[Icons]

Callouts: 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.

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	100
Table filter	Profile setting	Use current setting	*USRLIBL, BOATS
Table filter fit 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
Find record columns	Shipped default	Use current setting	Columns...

Tables → Find Record

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

Action	BTYPE	BNAME	BFEET	BYEAR	BCOST	BNT01	BNT02	BNT03	BNT04
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.
P		Monterey Marine Custom	80	1996	2975000	-Located in Stuart, FL	-Monthly payment.	-Fuel: Approximately 2000 gallons	-Water: Approximately 300 gallons

New in V5R4

Tables → Update Function

1 **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" value="P"/>	P=Powered S=Sailing
BNAME	CHAR (30)	<input type="text" value=""/>	boat name
BFEET	NUMERIC (3,0)	<input type="text" value="80"/>	Length in feet
BYEAR	NUMERIC (4,0)	<input type="text" value=""/>	Year built
BCOST	NUMERIC (9,0)	<input type="text" value=""/>	Price in US\$

Wildcards may be used in the selection

2 **Records to Update**

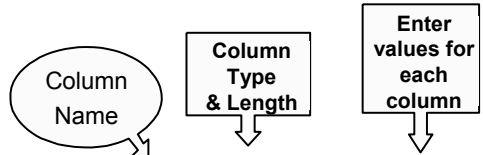
Action	BTYPE	BNAME	BFEET	BYEAR	BCOST	BNT01	BNT02	BNT03	BNT04
<input checked="" type="checkbox"/>	C	Poodle Boat Co Aluminum	80	1979	1000000	-Located in S. Diego, CA	-Twin Detroit Diesels, dinner cruise	and long range fishing boat, sleeps 33.	
<input checked="" type="checkbox"/>	P	Monteary Marint. Custom	80	1996	2975000	-Located in Stuart, FL	-Monthly payment. Approximately 2000 gallons	-Water: Approximately 300 gallons	

3 **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="Poodle 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

Inserting New Records into A Table



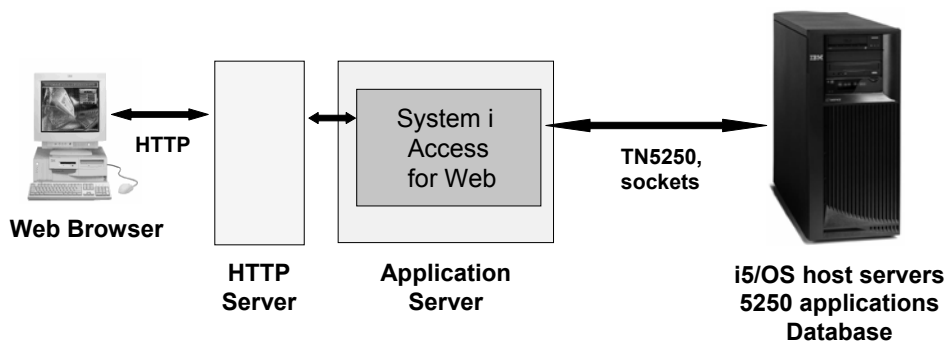
Insert Record

To insert a record, specify column values and click Insert Record.

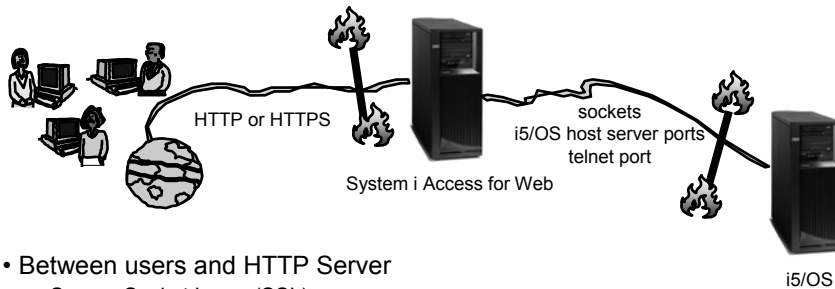
Column	Type	Value	Description
BTYPE	CHAR (1)	<input type="text"/>	P=Powered S=Sailing
BNAME	CHAR (30)	<input type="text"/>	boat name
BFEET	NUMERIC (3,0)	<input type="text" value="0"/>	Length in feet
BYEAR	NUMERIC (4,0)	<input type="text" value="0"/>	Year built
BCOST	NUMERIC (9,0)	<input type="text" value="0"/>	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

Part 2: Security Considerations

System i Access for Web Environment



System i Access for Web Environment (continued)



- Between users and HTTP Server
 - Secure Socket Layer (SSL)
 - Virtual Private Networking (VPN)
 - Firewalls
- Between System i Access for Web and i5/OS
 - VPN
 - Firewalls

Authentication security options

- How does the user authenticate to System i Access for Web?
- How does System i Access for Web authenticate with i5/OS?
- System i Access for Web in a WebSphere Single Signon (SSO) environment
- Special considerations for 5250

Authentication

- Authentication is verifying the identity of the user
- System i Access for Web supports two types of authentication
 - Application
 - System i Access for Web handles the authentication
 - Application Server
 - WebSphere Application Server handles the authentication
- Specified by the AUTHTYPE parameter on the CFGACCWEB2 command
 - Application: AUTHTYPE(*APP)
 - Application Server: AUTHTYPE(*APPSVR)

Authorization

- Authorization is verifying that authenticated users have permission to access requested resources
- System i Access for Web uses the i5/OS user profile and object level security to authorize access to i5/OS resources
- System i Access for Web provides application level control of access to functions through policies
 - Policies can be administered at the i5/OS user and group profile levels

Policies
Profile: JHANSEN

Action	Category	Description	Access
	S250	S250 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	Duallv messages, send messages, and message output custom settings.	Allowed

Application Authentication

- System i Access for Web handles authentication
- i5/OS user profile and password
 - Hostname specified by the TGTSVR parameter on the CFGACCWEB2 command
- Method: HTTP basic authentication
 - RFC2617
 - User profile and password are encoded (not encrypted) in the HTTP headers and should be protected



Application Server Authentication

- WebSphere handles authentication
- WebSphere credentials
 - Typically a user ID and password
 - Can be Windows domain login information (new in V6R1)
 - Kerberos-based
 - Requires WebSphere Application Server V6.1
 - Authenticated with the active WebSphere user registry
- Specified by the AUTHTYPE parameter on the CFGACCWEB2 command
 - Application Server Authentication: AUTHTYPE(*APPSVR)
- WebSphere provides different methods of gathering credentials
 - Applications can choose which methods to support

Application Server Authentication (continued)

- System i Access for Web supports two methods of gathering credentials
 - HTTP basic authentication
 - User ID and password are encoded (not encrypted) in the HTTP headers and should be protected
 - Form-based authentication
 - User ID and password are clear text and should be protected
 - Kerberos-based authentication (V6R1)
 - Windows domain login information sent via Simple and Protected GSS-API Negotiation Mechanism (SPNEGO)
 - No additional prompt for user credentials
- Specified by the AUTHMETHOD parameter on the CFGACCWEB2 command
 - HTTP basic authentication: AUTHMETHOD(*BASIC)
 - Form-based authentication: AUTHMETHOD(*FORM)
 - Kerberos-based authentication: AUTHMETHOD(*KERBEROS)

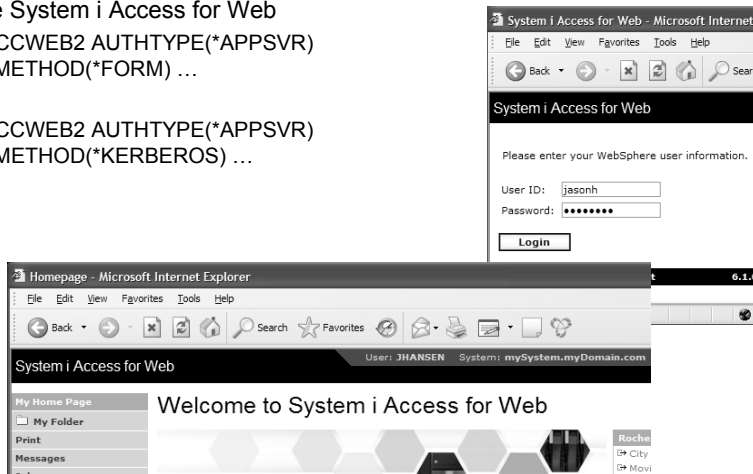


Application Server Authentication Authorization

- HTTP basic authentication and form-based authentication
 - System i Access for Web uses Enterprise Identity Mapping (EIM) to map the authenticated WebSphere user identity to an i5/OS user profile
 - System i Access for Web identifies the user by the mapped i5/OS user profile
 - i5/OS user profile is used to authorize access to i5/OS resources using object level security
- Kerberos-based authentication
 - System i Access for Web uses Kerberos-based credentials to authenticate with i5/OS
 - i5/OS uses Network Authentication Service (NAS) and EIM to map the Kerberos-based identity to an i5/OS user profile
 - System i Access for Web identifies the user by the mapped i5/OS user profile
 - i5/OS user profile is used to authorize access to i5/OS resources using object level security

Application Server Authentication Configure System i Access for Web

- Configure System i Access for Web
 - CFGACCWEB2 AUTHTYPE(*APPSVR)
AUTHMETHOD(*FORM) ...
 - CFGACCWEB2 AUTHTYPE(*APPSVR)
AUTHMETHOD(*KERBEROS) ...



5250 Sessions

- 5250 sessions can be started to any system running i5/OS
- Must provide user profile and password on i5/OS Sign On screen

Start Session

Server: ?

Port:

Code page:

Workstation ID ?

Use user ID

Specify workstation ID

Avoid duplicates for this user

Avoid duplicates with other users

General ?

Initial macro:

Bypass signon

Display HTML data in fields

Sign On

System:

Subsystem:

Display:

User:

Password:

Program/procedure:

Menu:

Current library:

RELEASE: V05R03M00
DRIVER: 2600722

USE OF THIS SYSTEM IS FOR IBM MANAGEMENT APPROVED PURPOSES ONLY.
USE IS SUBJECT TO AUDIT AT ANY TIME BY IBM MANAGEMENT.

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5250 Session Bypass Signon

- QRMTSIGN system value must be *VERIFY
- Select bypass signon when starting or configuring a session

Start Session

System

System:

Port:

Code page:

Workstation ID

Use user ID

Specify workstation ID

Avoid duplicates for this user

Avoid duplicates with other users

General

Initial macro:

Bypass signon

Display HTML data in fields

Configure New Session

General

Session: * required

Default view:

Initial macro:

Bypass signon

Display HTML data in fields

Enable advanced JavaScript functions

System

System:

Port:

- System i Access for Web must be configured for application authentication or application server authentication with Kerberos for bypass signon to be available

- CFGACCWEB2 AUTHTYPE(*APP) ...
- CFGACCWEB2 AUTHTYPE(*APPSVR) AUTHMETHOD(*KERBEROS) ...

5250 Sessions in Portlets

- Bypass signon
 - QRMTSIGN system value must be *VERIFY
 - Settings to enable bypass signon and specify the credential to use
- No macro support

Bypass signon

Enable bypass signon

Use credential specific to this portlet window

User:

Password:

Confirm password:

Use credential set with iSeries Credentials portlet

Credential:

Use system shared credential set by administrator

Credential:

iSeries 5250 Session

Start Session

Server

Server:

Port:

Code page:

Display HTML data in fields

Workstation ID

Use user ID

Specify workstation ID

Avoid duplicates for this user

Avoid duplicates with other users

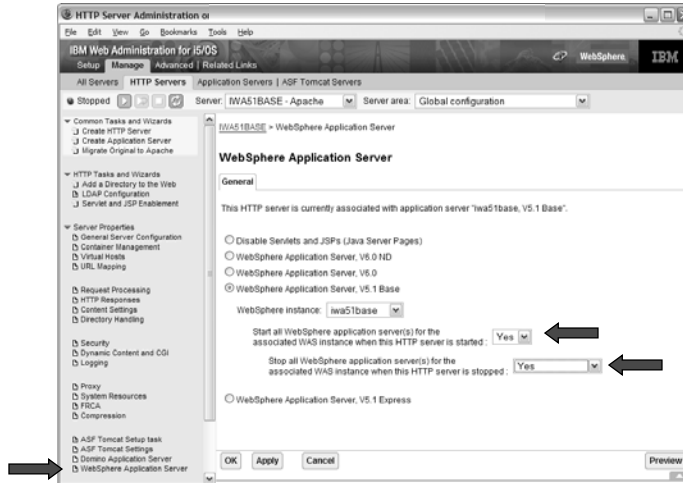
Part 3: Tips

Tip – Automatically start Web environment after IPL

Auto start web environment after an IPL?

Two steps:

Step 1: Configure the HTTP web server to automatically start the WebSphere application server when it starts



Auto-start Web environment after an IPL? (cont.)

Step 2: Use the following command to start the HTTP web server as part of your IPL procedures and it will start your WebSphere application server.

– **STRTCPSVR SERVER(*HTTP) HTTPSVR(<http_server_name>)**

E.g. HTTP server name IWA51BASE

STRTCPSVR SERVER(*HTTP) HTTPSVR(IWA51BASE)

Tip – Connect to multiple servers

Access Considerations

1. A single iSeries system
2. Web server
3. Application server
4. iSeries Access for Web
5. 5250 applications
6. Database
7. Files
8. Printer output
9. ...



- **Browser users provide url address to System A and can automatically access resources on System A**
- **Users can also start 5250 emulation and Database functions to any other iSeries system in the network**
 - **Users cannot work with printer output, IFS, commands, etc on other systems with this setup**

Can use 5250 and Database to any system in the network

• Can connect to any iSeries in my network and run 5250 emulation and Database (upload, download, work with tables, etc)

- 5250 Emulation

- Provides a panel to start a 5250 session and save this session configuration

- Database

- You can add additional connections via Policy → Database Connections
- These additional connections are then available to users on the Database screens.

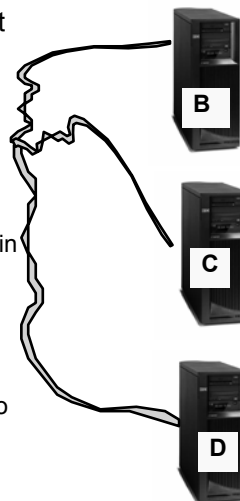


Accessing Multiple iSeries Systems

• Use iSeries Access for Web to connect to multiple iSeries systems

- Backend Systems

- The backend Systems (B, C, D) contain business data.
- They are inside the company network.
- You don't want to install web serving software on these systems
- Some users always need to connect to System B, some to System C, and some to System D



What Needs to Be Installed



Administrator sets up...



System A is added

System A needs:

- HTTP/HTTPS
- Web application server
- System i Access for Web (installed and configured)

Systems B, C, and D...

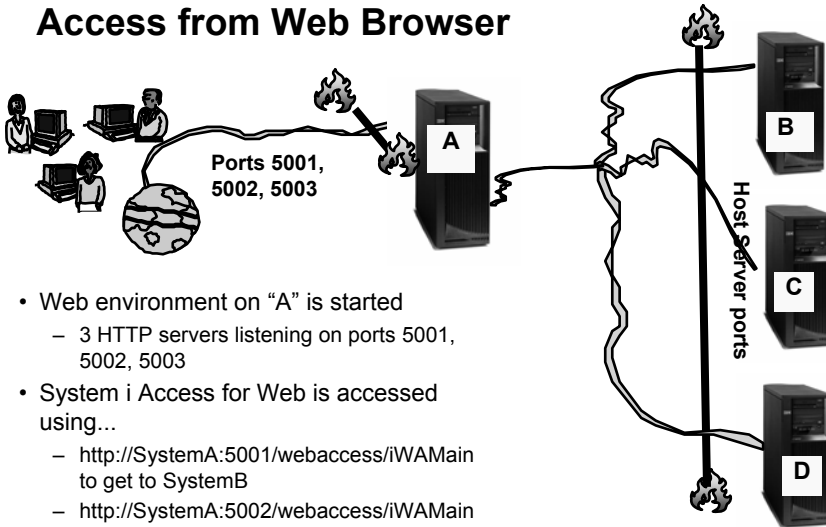
- Must have 57xx-XW1 iSeries Access Family installed
- 57xx-XH2 iSeries Access for Web installed (RSTLICPGM) but not configured

Setting up System A



- System A is added to the network.
- System A has HTTP/HTTPS, web app server, and System i Access for Web
 - Configure 3 HTTP servers with 3 different port numbers -- one for System B, one for System C, and one for System D
 - Configure 3 WAS (or Tomcat) instances (one for each system)
 - Configure iSeries Access for Web in each instance (use TGTSVR parameter on CFGACCWEB2 command)
 - Adds "realm=server_name.mydomain.com"
 - For WAS: /QIBM/UserData/Access/web2/<appsrvtype>/<wasinst>/<appsvr>/config/webaccess.properties
 - For Tomcat: /QIBM/UserData/Access/Web2/<appsrvtype>/<tcsvrname>/config/webaccess.properties

Access from Web Browser



- Web environment on “A” is started
 - 3 HTTP servers listening on ports 5001, 5002, 5003
- System i Access for Web is accessed using...
 - `http://SystemA:5001/webaccess/iWAMain` to get to SystemB
 - `http://SystemA:5002/webaccess/iWAMain` to get to SystemC
 - `http://SystemA:5003/webaccess/iWAMain` to get to SystemD

Please note:

This is only one example of how to configure this environment.

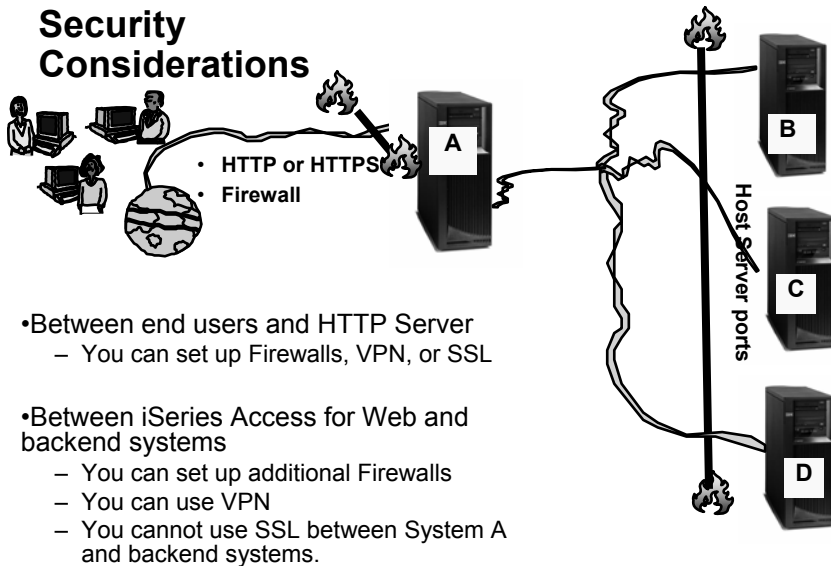
User starts browser and keys in url address...

- iSeries Access for Web user is providing different address to get to each iSeries...
 - `http://SystemA:5001/webaccess/iWAMain` to get to SystemB
 - `http://SystemA:5002/webaccess/iWAMain` to get to SystemC
 - `http://SystemA:5003/webaccess/iWAMain` to get to SystemD



The user must provide a correct iSeries user id and password to each backend system to get access to information

Security Considerations



Tip – Displaying printer output for other users

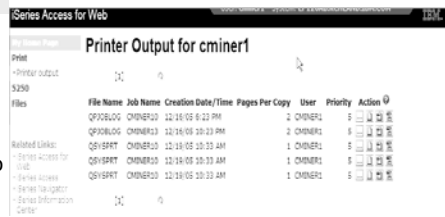
Printer Output

- Default printer output displayed is for the authenticated user id.
- If you want to see a different user's spooled files, you can do it by adding a parameter to the System i Access for Web path.

• Example...

- I am signed on as user 'cminer1'. By default I can see all 'cminer1' spool files (figure 1)
- If I enter a new url path as http://your_system/webaccess/iWASpool?user=warrena
- Then I would be able to see all 'warrena' spool files (figure 2)

1



2



Must have the proper authority to see other user's spooled files

Tips – Setting up policies

Recommendations for Setting Up Policies

- Do as much customization as you can using *PUBLIC
- Create some 'Groups' of users and apply more specific customization
- Examples:
 - Setting up Printer Output view
 - Setting up Mail Server SMTP address
 - Creating look and feel of 5250 sessions
 - Creating Database Connections
 - General Page Layouts
- Example: Create "Office" group
 - Take away all tabs and functions except (for example) Printer Output, 5250, Database, IFS



Use *PUBLIC to Set up Printer Output

Shipped look

- 15 columns
- Multiple Actions

Display only attributes that make sense for your users

- Fits on one screen

File	User	Creation	Pages	Per Copy	Copies	Status	Action	User	Job Name	Number	Job
QVSPRT	CMNER10	12/15/05 4:31 PM	1	1	Ready	[Icons]	CMNER	CMNER0	502274		
QVSPRT	CMNER10	12/15/05 4:31 PM	1	1	Ready	[Icons]	CMNER	CMNER0	502274		
QVSPRT	CMNER10	12/15/05 4:32 PM	1	1	Ready	[Icons]	CMNER	CMNER0	502274		
QVSPRT	CMNER10	12/15/05 4:39 PM	1	1	Ready	[Icons]	CMNER	CMNER0	502274		
QVSPRT	CMNER10	12/15/05 4:41 PM	1	1	Ready	[Icons]	CMNER	CMNER0	502281		
QPRINT	CMNER10	12/15/05 4:48 PM	1	1	Ready	[Icons]	CMNER	QVWAPDSTR	502285		
QPRINT	CMNER10	12/15/05 4:50 PM	1	1	Ready	[Icons]	CMNER	QVWAPDSTR	502287		
QPRINT	CMNER10	12/15/05 4:52 PM	1	1	Ready	[Icons]	CMNER	QVWAPDSTR	502287		
QPRINT	CMNER10	12/15/05 4:57 PM	1	1	Ready	[Icons]	CMNER	QVWAPDSTR	502291		



- Use Policies / Preferences to remove attribute columns
- Use Policies to modify the Action options

File Name	Job Name	Creation Date/Time	Pages	Per Copy	User	Priority	Action
QPXBLOG	CMNER10	12/15/05 6:23 PM	2	CMNER1	5	[Icons]	
QPXBLOG	CMNER10	12/15/05 20:23 PM	2	CMNER1	5	[Icons]	
QVSPRT	CMNER10	12/15/05 20:33 AM	1	CMNER1	5	[Icons]	
QVSPRT	CMNER10	12/15/05 20:33 AM	1	CMNER1	5	[Icons]	
QVSPRT	CMNER10	12/15/05 20:33 AM	1	CMNER1	5	[Icons]	

Work with Specific User Profile To Set Policy for IFS

- Set a 'Default Directory' for a specific user



In this example, I went into CMINER1 profile, and set policy to show only the 'CMINER1' directory to this user...

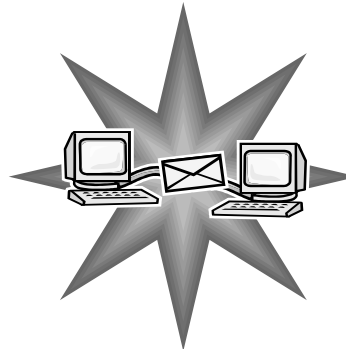


Tips – Integrating with your network mail server



Integrate User's email with System i Access for Web

- Can send results of the following System i Access for Web functions:
 - PDF view of print information
 - Database (SQL) results
 - Information stored in the IFS
 - CL command
- Sent as an attachment to 'email'
- One-step way to distribute information across the network, and particularly useful when recipient is:
 - Not an i5/OS user
 - Does not have access to a web browser



Users can easily email results

'Mail' option displays for function of Access for Web that supports 'Mail'

The image shows two screenshots from the iSeries Access for Web interface. The top screenshot is the 'Run SQL' screen. The 'SQL Statement' field contains a query: `SELECT * FROM "QGPL"."QSALERECD"`. The 'SQL Output' section shows 'Type' set to 'Preview' and 'Destination' set to 'Browser'. A dropdown menu is open, showing options: 'Integrated File System', 'Mail as attachment', and 'Personal folder'. An arrow points from the text 'Mail output' to the 'Mail as attachment' option. The bottom screenshot shows the 'PDF Output Settings' dialog box. The 'Destination' is set to 'Browser'. An 'Advanced' dropdown is open, showing options: 'Browser', 'Mail as attachment', 'Personal folder', and 'Output Queue'. An arrow points from the 'Mail as attachment' option in the 'Run SQL' screenshot to the 'Mail as attachment' option in the 'Advanced' dropdown.

How to set up Access for Web to use e-mail

- Do nothing
 - If you currently use OS/400 System Distribution Directory (SDD) to store your e-mail addresses, then do nothing to Access for Web.
 - If no SMTP address has been provided, Access for Web will look in SDD for e-mail address for signed-on user

- Use Access for Web 'Customize' function to set up SMTP mail server address and each user's e-mail address
 - Use Policies (*PUBLIC) to set SMTP mail server address for everyone
 - Use Policies for each user to add unique e-mail address, or
 - Let each user use Preferences to set up their own e-mail address

- Use 'Import Policy Settings' function to provide all e-mail addresses to Access for Web

You must 'Customize' to use Email function

- You need to identify your SMTP Server address

- Use *PUBLIC to set up SMTP Server address
 - You probably have same SMTP server address for all users

Policy	Derived From	Action
Mail access	Shipped default	Use current setting Allow
Send mail	Shipped default	Use current setting Allow
SMTP mail server	Shipped default	Use current setting us.ibm.com
E-mail address is user preference	Shipped default	Use current setting Allow

Note:
If the SMTP server address is blank, Access for Web will query the system distribution directory (SDD) for email config info for your profile

All Users' Email addresses must be set up

- e-Mail address must be set for each user
 - Administrator could go into each user's profile and set email address (figure 1)
 - Each user could do this themselves through 'Preferences' (figure 2)

iSeries Access for Web User: cminer System: RCHLAND.IBM.COM

My Home Page
 My Folder
 Print
 Messages
 Jobs
 5250
 Database
 Files
 Command
 Download
 Customize
 Preferences
 Policies
 Settings
 Transfer configuration
 Other

Edit Policies - Mail

Profile: CMINER

Policy	Derived From	Action	Setting
Mail access	Shipped default	Use current setting	Allow
Send mail	Shipped default	Use current setting	Allow
SMTP mail server	Profile setting	Use current setting	us.ibm.com
E-mail address	Profile setting	Use current setting	cminer@us.ibm.com
E-mail address is user preference	Shipped default	Use current setting	Allow

Save Cancel Apply

iSeries Access for Web User: cminer System: RCHLAND.IBM.COM

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

Edit Preferences - Mail

Preference	Derived From	Action	Setting
E-mail address	Profile setting	Use current setting	cminer@us.ibm.com

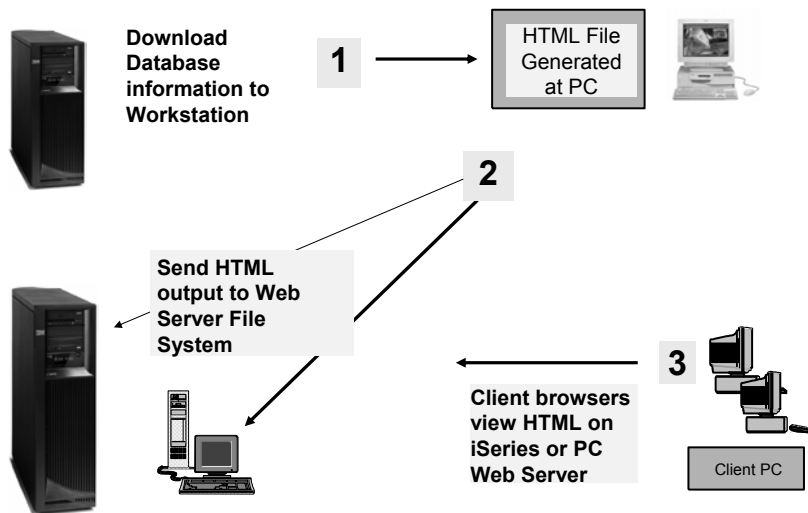
Save Cancel Apply

Preferences help
 View help for editing preferences.

Questions?

Appendix A: HTML Output Types

Use HTML File support Updating a Web server



HTML Output Settings

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

Displaying output in a paged list *iSeries Access for Web (continued)*

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

	BCOST	BTYPE	BNAME	BFEE BYEAR
Jobs	100000000	A	Hangar	20 1940
5250	100000000	A	Spandau1	72 3000
Database	100000000	A	MOLSLINIEN	300 1999
Tables	100000000	A	Spandau	720 1999
My requests	1000000	C	Paddle Boat Co Aluminum	80 1979
Run SQL	13000	P	Malco Sportfisher	19 1989
Copy data to table	23900	P	Carver Santa Cruz	28 1978
Import request	55000	P	Monk Flybridge/Sedan	34 1985
Import query	19900	P	Monk Bridgedeck Cruiser	36 1956
Extract i3/OS data	2975000	P	Monterey Marine Custom	80 1996
Files	100000000	P	Katemeran	200 1993
Command	69950	S	Corsair 27	27 1994
Download	37900	S	Hunter 33.5	23 1990
Customize	27500	S	Bill Garden Schooner	26 1953
Other	179500	S	Fountain Pajot Antigua	37 1993

Contrasting other layouts

Customer Information

CUSNUM	LSTNAM	INIT	STREET	CITY	STATE	ZIP
938472	Henning	G K	4859 Elm Ave	Dallas	TX	7521
839283	Jones	B D	21B NW 135 St	Clay	NY	13041
392859	Vine	S S	PO Box 79	Broton	VT	5046
938485	Johanson	J A	3 Alpine Way	Helen	GA	30545
397267	Tyron	W E	13 Myrtle Dr	Hector	NY	14841
389572	Stevens	K L	208 Snow Pass	Denver	CO	8022
846283	Alison	J S	787 Lake Dr	Isle	MN	563
475938	Doe	J W	59 Archer Rd	Sutter	CA	9568
693829	Thomas	A N	3 Dove Circle	Casper	WY	826C
593029	Williams	E D	485 SE 2 Ave	Dallas	TX	7521
192837	Lee	F L	5963 Oak St	Hector	NY	148
583990	Abraham	M T	392 Mill St	Isle	MN	563

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

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

SQL Output

Page 1 of 3 Jump to page: 1 Total: 12

CUSNUM	LSTNAM	INIT	STREET	CITY	STATE	ZIP
938472	Henning	G K	4859 Elm Ave	Dallas	TX	75217
839283	Jones	B D	21B NW 135 St	Clay	NY	13041
392859	Vine	S S	PO Box 79	Broton	VT	5046
938485	Johanson	J A	3 Alpine Way	Helen	GA	30545
397267	Tyron	W E	13 Myrtle Dr	Hector	NY	14841

Page 1 of 3 Jump to page: 1 Total: 12

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

iSeries Access for Web (continued)

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

Customize Cell data: **Data Settings**
 Include column headings **Heading Settings**

Template

File: /boats/homepage/accesswater.html **Browse...**
 Tag: %CONTENT%

General

Character set: Multilingual [UTF-8]
 Maximum rows:

File Edit View Favorites Tools Help

Access for Water Supplying quality from since 2002

Home

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

IBM iSeries Service

Done Internet

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

- System i Access for Web
- System i 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	No	Yes
• ASCII Text	Yes	Yes
• Text – Tab delimited	Yes	Yes
• Text - Delimited	Yes	No
• Basic Random	No	Yes
• Basic Sequential	No	Yes
• DOS Random	No	Yes
• DOS Random Type 2	No	Yes

Supported File Formats (continued)

Supported file formats	System i Access for Web Database (servlets)	System i Access for Windows Data Transfer
• Preview (on downloads)	Yes	Yes
• Portable Document Format (PDF) (on downloads)	Yes	No (can send to PC printer by selecting 'Print' as output device)
• Scalable Vector Graphics Chart	Yes	No
• 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
• Lotus 123	No	Yes
• Lotus 123 Version 1	Yes	No
• Lotus 123 Version 4	No	Yes
• Lotus 123 Version 9	No	Yes

Comparison of Database Capabilities

Feature / Function	System i Access for Windows	System i Access for Web	System i Access for Linux
ODBC driver	Yes	No	Yes
OLE DB provider	Yes	No	No
.NET provider	Yes	No	No
From i5/OS, start programs/commands on PC – Incoming Remote Command	Yes	No	No
GUI to find, add, update, delete selected records in an i5/OS database Table	No	Yes	No
GUI to convert query results to .PDF format	No	Yes	No
GUI to convert query results to a chart	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 System i Access for Windows Data Transfer requests	No	Yes	No
Programming Support – ActiveX automation Objects – Limited support using java.net.URL and the documented URL Interfaces	Yes No	No Yes	No No

Comparison of Data Transfer and Access for Web Database

Feature / Function	System i Access for Windows	System i Access for Web
• All SQL Statements Supported	Yes	Yes
• Wizards to build SELECT statements and convert to PC format	Yes	Yes
• Can build SELECT statements with group, having, and join support	Yes	Yes
• Can create dynamic queries (prompted for input at time of running)	No	Yes
• Access to members other than the default member	Yes	No
• 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)
• Upload data directly from Excel • Excel dates/times handled as dates/times	Yes Yes	No Yes
• 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 i5/OS</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 System i Access for Windows Data Transfer requests to System i Access for Web requests 	<p>Data Transfer From iSeries</p> <ol style="list-style-type: none"> 1. .DTF - New request type used by System i 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 i5/OS</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 System i Access for Windows Data Transfer requests to System i Access for Web requests 	<p>Data Transfer To iSeries</p> <ol style="list-style-type: none"> 1. .DTT - New request type used in System i 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 System i 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 System i 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. System i Access for Windows enables you to work with large amounts of rows using BIFF5, BIFF7, BIFF8 file types.



Supported file formats	System i Access for Web Database (servlets)	System i 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

System i 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**

System i Access for Web

Database

- **Runs on an i5/OS 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 convert results to SVG charts**
- **Can create Requests and give to other users to run**
- **Can Import Client Access Data Transfer requests; and IBM Query for i5/OS (5761-QU1) and DB2 Query Manager SQL requests.**



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