



Deep Dive Into System i Access for Web Session 4:

Database, Security, Tips

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<http://www.ibm.com/systems/i/software/access/web>

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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.

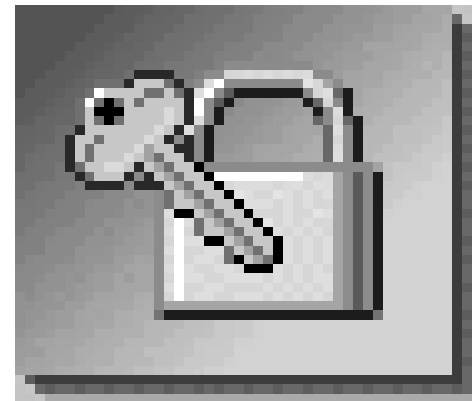
Import query

- 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.

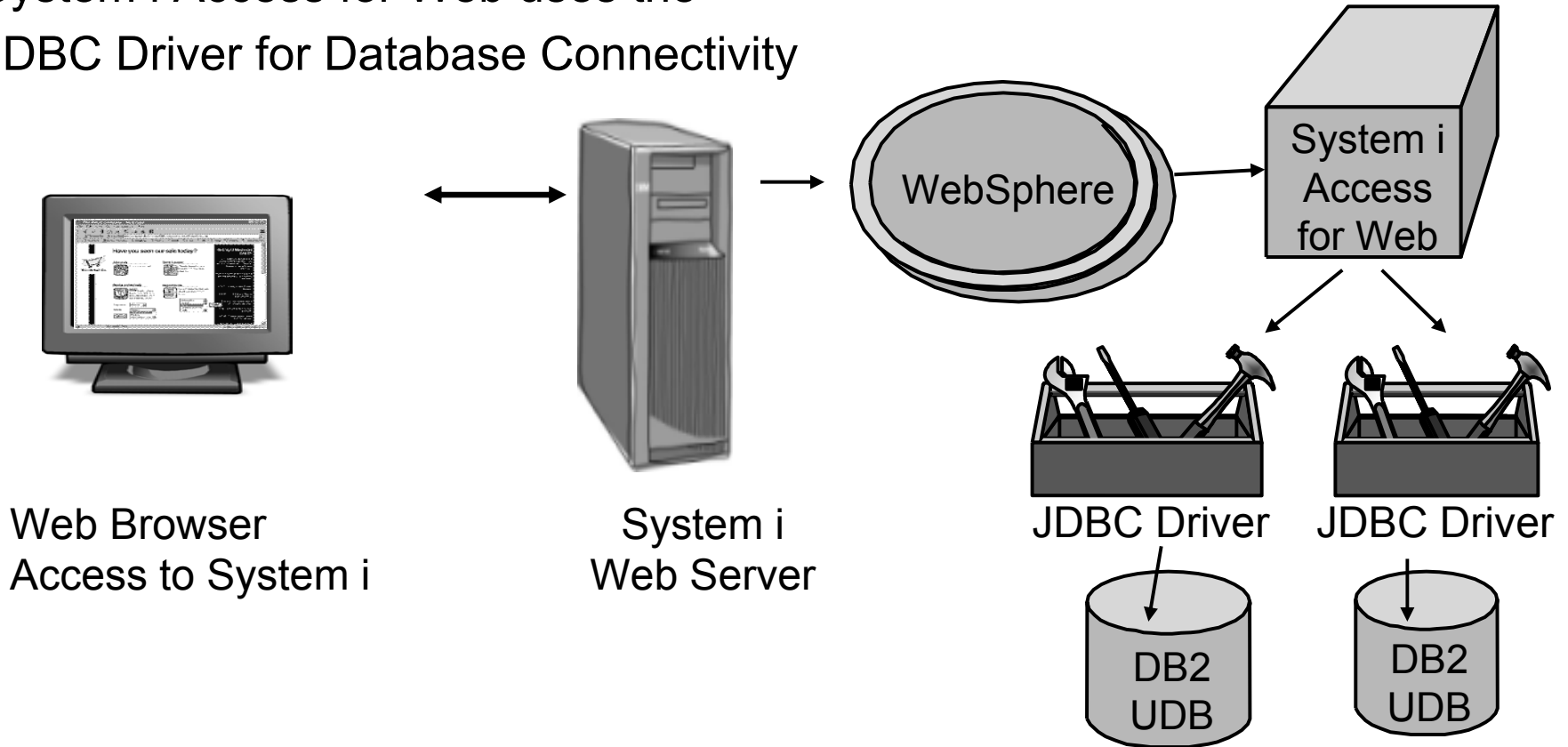
Database-related Security and Administration



Database Overview

System i Access for Web

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

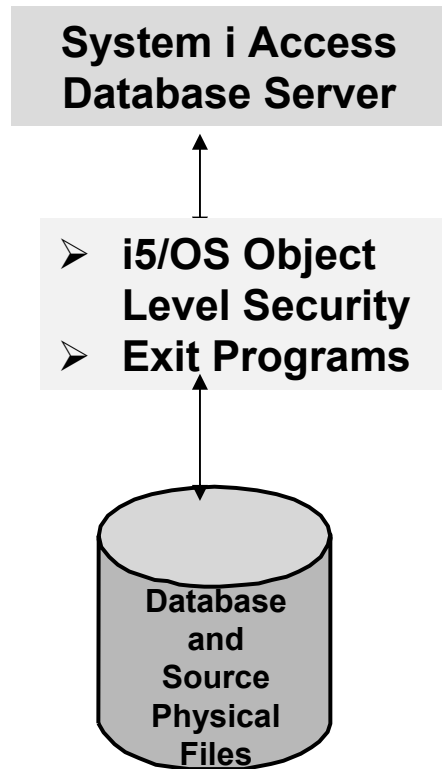


Security – Access to DB2 for i5/OS

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

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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 <input type="button" value="v"/> Allow <input type="button" value="v"/>	<input type="button" value="?"/>
Database tab	Shipped default	Use current setting <input type="button" value="v"/> Show <input type="button" value="v"/>	<input type="button" value="?"/>
Tables	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	<input type="button" value="?"/>
Maximum table rows	Shipped default	Use current setting <input type="button" value="v"/> 500 <input type="button" value="v"/>	<input type="button" value="?"/>
Table filter	Shipped default	Use current setting <input type="button" value="v"/> *USRLIBL	<input type="button" value="?"/>
Table filter is user preference	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	<input type="button" value="?"/>
Insert records into table	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	<input type="button" value="?"/>
Insert record columns	Shipped default	Use current setting <input type="button" value="v"/> Columns...	<input type="button" value="?"/>
Update records in table	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	<input type="button" value="?"/>
Update record columns	Shipped default	Use current setting <input type="button" value="v"/> Columns...	<input type="button" value="?"/>
Quick view table records	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	<input type="button" value="?"/>
Maximum quick view rows	Shipped default	Use current setting <input type="button" value="v"/> 1000 <input type="button" value="v"/>	<input type="button" value="?"/>
Order records by relative record number	Shipped default	Use current setting <input type="button" value="v"/> No <input type="button" value="v"/>	<input type="button" value="?"/>
Find records in table	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	<input type="button" value="?"/>
Find record columns	Shipped default	Use current setting <input type="button" value="v"/> Columns...	<input type="button" value="?"/>
Requests	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	<input type="button" value="?"/>
Run request	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	<input type="button" value="?"/>
Copy request	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	<input type="button" value="?"/>
Delete request	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	<input type="button" value="?"/>
Rename request	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	<input type="button" value="?"/>
Create automated task	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	<input type="button" value="?"/>
Transfer request	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	<input type="button" value="?"/>
Edit request	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	<input type="button" value="?"/>
Save request	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	<input type="button" value="?"/>
Import requests	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	<input type="button" value="?"/>
Export requests	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	<input type="button" value="?"/>
List request shortcuts	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	<input type="button" value="?"/>
Create request shortcut	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	<input type="button" value="?"/>
Copy request shortcut	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	<input type="button" value="?"/>
Delete request shortcut	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	<input type="button" value="?"/>
Rename request shortcut	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	<input type="button" value="?"/>
Request list columns	Shipped default	Use current setting <input type="button" value="v"/> Columns...	<input type="button" value="?"/>
Run SQL requests	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	<input type="button" value="?"/>
Run statements other than query	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	<input type="button" value="?"/>
Copy data to table	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	<input type="button" value="?"/>
Create new tables	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	<input type="button" value="?"/>
Append data to tables	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	<input type="button" value="?"/>
Replace data in tables	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	<input type="button" value="?"/>
Import request	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	<input type="button" value="?"/>
Import query	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	<input type="button" value="?"/>
Extract i5/OS object data	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	<input type="button" value="?"/>
Default connection	Shipped default	Use current setting <input type="button" value="v"/> IBM Toolbox for Java - .ibm.com <input type="button" value="v"/>	<input type="button" value="?"/>
Default connection is user preference	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	<input type="button" value="?"/>
Add IBM Toolbox for Java to connection list	Shipped default	Use current setting <input type="button" value="v"/> Allow <input type="button" value="v"/>	<input type="button" value="?"/>



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

Add Database Connection

Profile: JHANSEN

Connection: ?

Driver class: ?

JDBC URL: ?

Set as default connection

Add Connection

Copy Data to Table

File to Copy

File: Browse...

File type: Comma Separated Value (.csv) Settings

Table to Receive Data

Table: ?

Action: Replace data if table exists

Connection

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

Copy Data to Table **Save Request...**

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.

Edit Policies - Database Connections

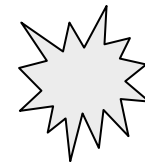
Profile: JHANSEN

Default connection: IBM Toolbox for Java - .IBM.COM

Default derived from: Shipped default

Action	Connection	Derived From
	Connection: IBM Toolbox for Java - .IBM.COM Driver class: com.ibm.as400.access.AS400JDBCdriver JDBC URL: jdbc:as400:// .IBM.COM;prompt=false;	Shipped default

[Add database connection](#)
Create a new database connection.



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

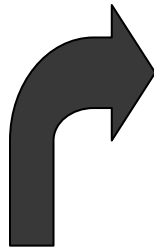
For the 'typical' end user



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
- i5/OS Information

My Requests

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

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Related Links:

- System i Access for Web
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- i5/OS Information Center
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SQL Output

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BCOST	BYEAR	BTYPE	BNAME	BFEET	BNT01
100000000	1940	A	Hangar	20	
100000000	2000	A	Spandau1	72	
100000000	1999	A	MOLSLINIEN	300	
100000000	1999	A	Spandau	720	
100000000	1995	P	Katemeran	200	
2975000	1996	P	Monterey Marine Custom	80	-Located in Stuart, FL
1000000	1979	C	Poole Boat Co Aluminum	80	-Located in S. Diego, CA
450000	1990	S	Merlin's Magic	54	-Designed by Dutch naval architect Ernst Van Derlaan.
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.
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
69000	1978	S	Morgan 382 Race/Cruise Sloop	38	-Has an Airex hull and skeg rudder. Has been rated by LLOYD's
63000	1979	S	Mariner Ketch	40	-Full keel and the rudder is keel hung
57900	1990	S	Hunter 33.5	33	-The boat has a large wheel steering a spade rudder.
55000	1985	P	Monk Flybridge/Sedan	34	-Double planked cedar on oak frames.
27500	1953	S	Bill Garden Schooner	36	-The hull is 1/8" caravel 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.

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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

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Find Boat

Select Boat Type

P ▼
 A
 C
P
 S
 T

n US\$ greater than or equal to:

n US\$ less than or equal to:

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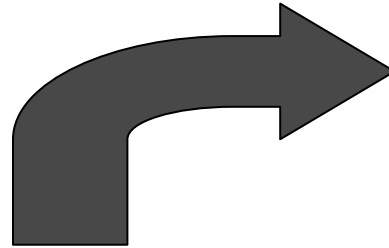
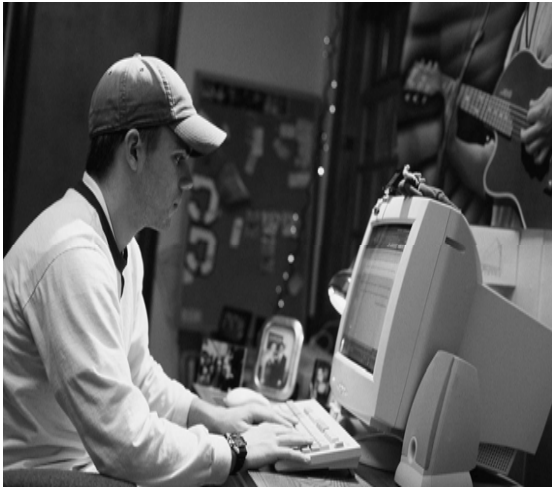
SQL Output

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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.

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Upload PC data to DB2 for i5/OS



Copying Data to DB2 for i5/OS

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

Specify:

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

Copy Data to Table

File to Copy

File:

File type:

Table to Receive Data

Table:

Action:

Connection

Connection:

[Database help](#)
View help for copying file data to a database table.

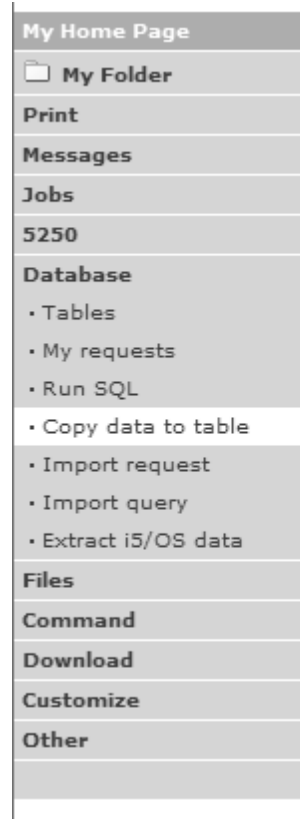
Creating a new table

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



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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Related Links:

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

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	<input type="text"/>	CHAR	1	0	T
BNAME	<input type="text"/>	CHAR	29	0	Miki Miki Original Tug
BFEET	<input type="text"/>	NUMERIC	3	0	126
BYEAR	<input type="text"/>	NUMERIC	4	0	1944
BCOST	<input type="text"/>	NUMERIC	9	0	249000
BNT01	<input type="text"/>	CHAR	71	0	-Located in Seattle, WA.
BNT02	<input type="text"/>	CHAR	66	0	-The "FLORENCE FILBERG" is an all-wood, single deck raised forward
BNT03	<input type="text"/>	CHAR	68	0	twin oil screw Miki class tug with sharp stem, molded hull and
BNT04	<input type="text"/>	CHAR	64	0	elliptical stern. Decks have a pronounced sheer forward and the
BNT05	<input type="text"/>	CHAR	69	0	deckhouse is located amidship with tow winch and related gear
BNT06	<input type="text"/>	CHAR	72	0	60kw generators.
BNT07	<input type="text"/>	CHAR	72	0	- 7/91 survey says,
BNT08	<input type="text"/>	CHAR	70	0	"As a motor yacht, she is massively stronger than any conventional
BNT09	<input type="text"/>	CHAR	70	0	yacht requirements and, therefore, with continued upgrading and
BNT10	<input type="text"/>	CHAR	63	0	proper maintenance, the vessel should exceed its longevity as a
BNT11	<input type="text"/>	CHAR	70	0	working vessel."
BNT12	<input type="text"/>	CHAR	62	0	
BNT13	<input type="text"/>	CHAR	55	0	
BNT14	<input type="text"/>	CHAR	52	0	
BNT15	<input type="text"/>	CHAR	49	0	
BHTML	<input type="text"/>	CHAR	12	0	MIKIMIKI.jpg
BHTM1	<input type="text"/>	CHAR	0	0	
BHTM2	<input type="text"/>	CHAR	0	0	

Query DB2 for i5/OS



Run SQL

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

- If you do not know SQL, then use the SQL Wizard to help you generate an SQL SELECT statement
- Select from a variety of output formats, including:
 - Preview
 - PDF
 - .XLS (Excel)
 - XML
 - SVG (V6R1)
 - ...

Run SQL

SQL Statement

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

SQL Wizard

SQL Output

Type: Preview

Settings

Destination: Browser

Settings

Format

Date: 3/2/08

Time: 7:36:44 PM

Connection

Connection: IBM Toolbox for Java -

.IBM.COM

Run SQL

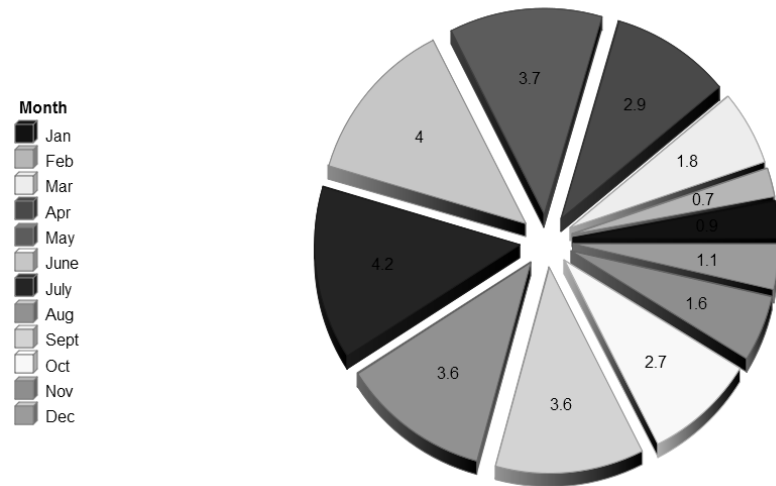
Save Request...



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)

Average Precipitation - Zumbrota



Zumbrota Weather

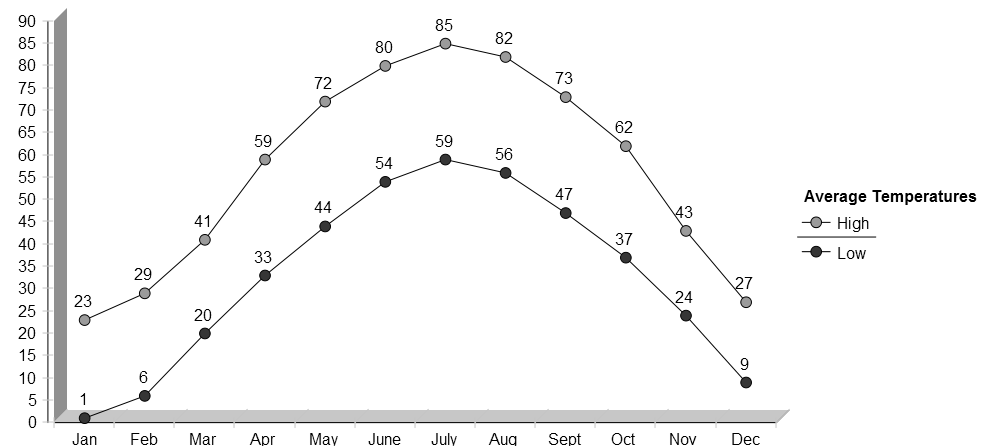


Chart Settings

- 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

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Related Links:

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- System i Navigator
- i5/OS Information Center
- System i Resource Center

Scalable Vector Graphics Chart Settings

Chart ?

Title:

Type: Bar Settings

Height: pixels

Width: pixels

Chart by: Columns

Display with depth

Show value labels

Enable interactivity

Legend

Title: ?

Location: Right

Colors ?

<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Color Order

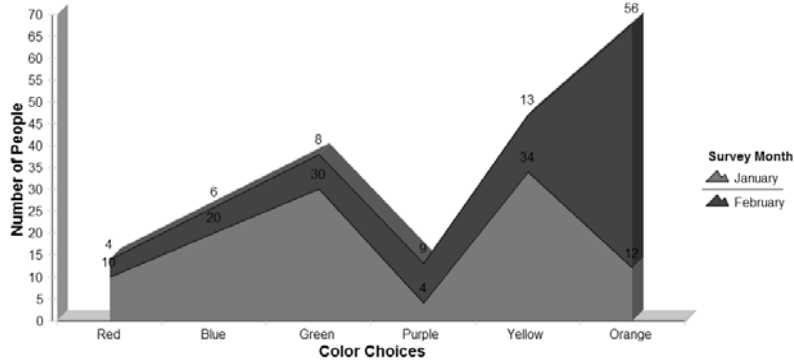
General ?

Supplemental character set: None

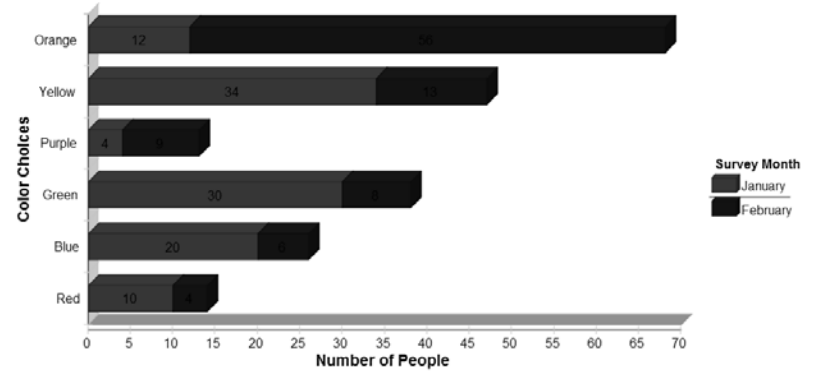
OK Cancel

Example Charts

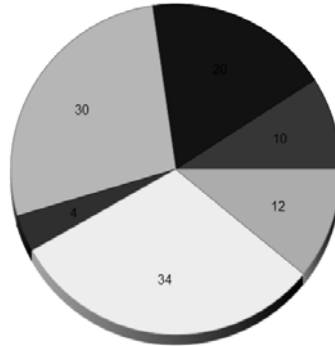
Favorite Colors



Favorite Colors



Favorite Colors

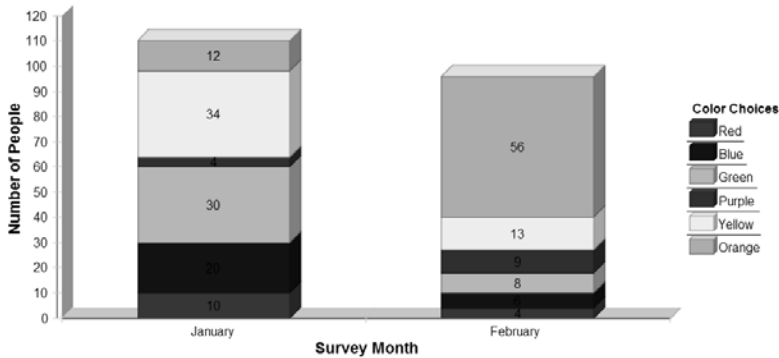


Number of People

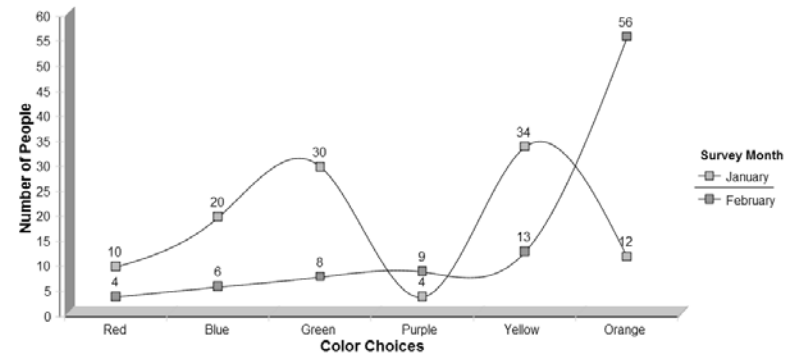
Color Choices



Favorite Colors



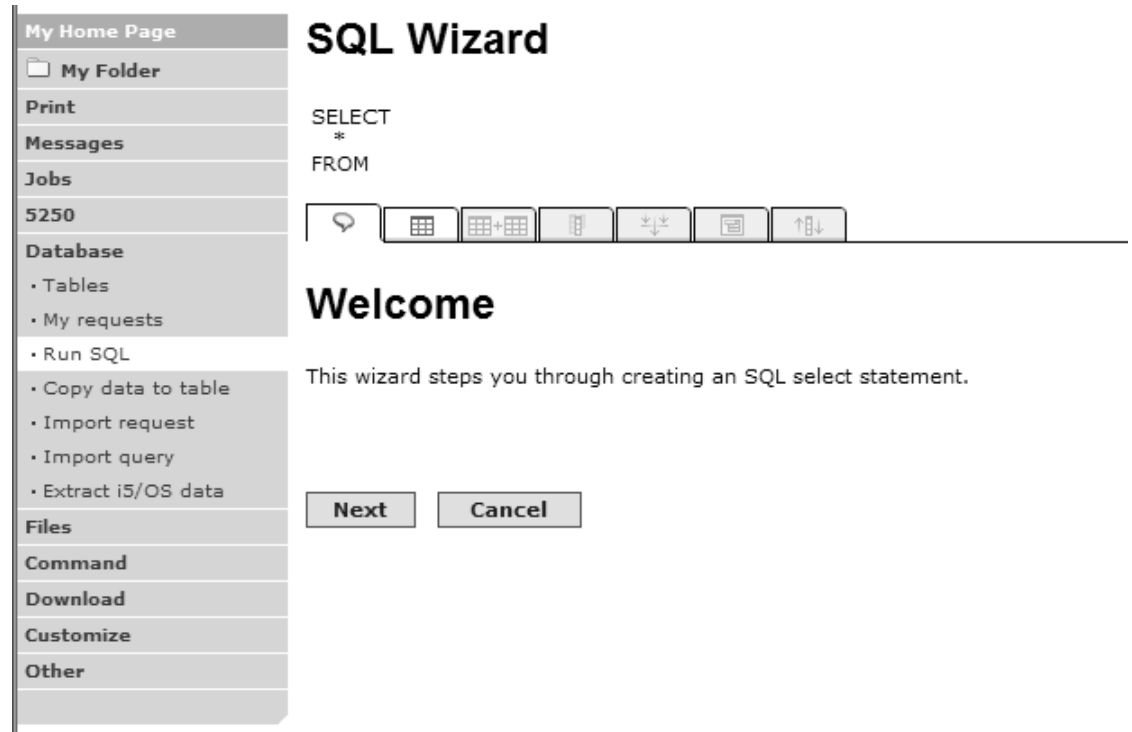
Favorite Colors



The SQL Wizard

The SQL Wizard helps you generate a SELECT statement

V6R1 includes support for joining tables



Identify the DB2 for i5/OS database table

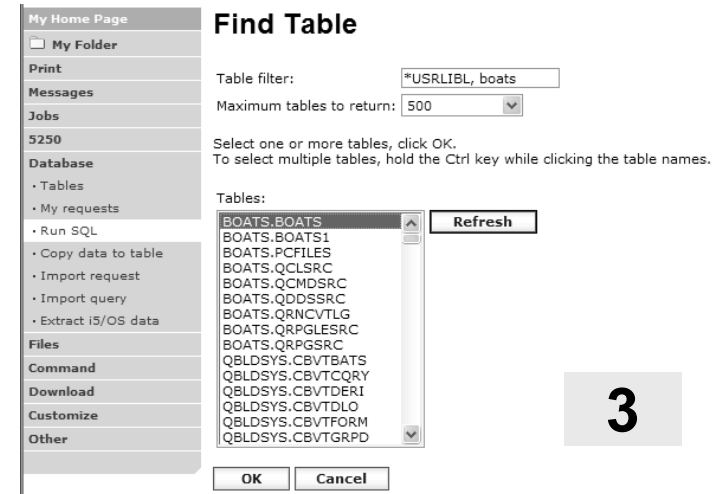
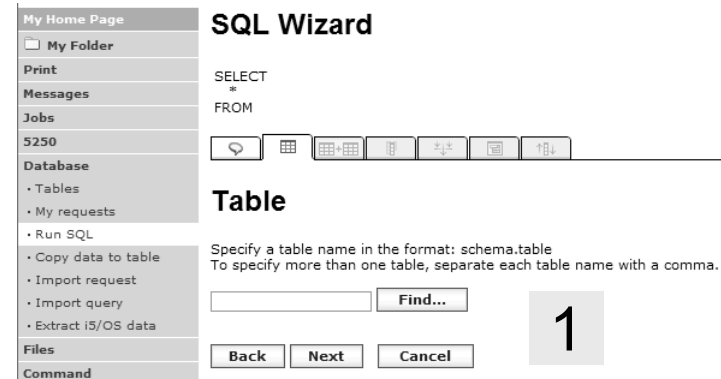
Step 1:

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

Find Table

Table filter:

Maximum tables to return:

Select one or more tables, click OK.
To select multiple tables, hold the Ctrl key while clicking the table names.

Tables:

QIWS.QCUSTCDT	<input type="checkbox"/>
QIWS.QMENUSRC	<input checked="" type="checkbox"/>

1

Join Type

The following join types are available for the selected tables. Select a join type.

INNER Return rows from each table having matching values for the join condition.

LEFT OUTER Return rows from each table having matching values for the join condition. Also return one row for each row in the first table that does not have a match in the second table.

RIGHT OUTER Return rows from each table having matching values for the join condition. Also return one row for each row in the second table that does not have a match in the first table.

LEFT EXCEPTION Return rows from the first table that do not have a match in the second table for the join condition.

RIGHT EXCEPTION Return rows from the second table that do not have a match in the first table for the join condition.

CROSS Return a result table where each row from the first table is combined with each row from the second table.

Join Condition

Type: LEFT OUTER

First table: QIWS.QCUSTCDT (T1)

Second table: QIWS.QMENUSRC (T2)

Type > First table > Second table > [Condition]

To add a condition to the select statement, click Add New Condition. To continue, click Next.

3

Select your Output Columns

Step 2:

Choose columns

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

SQL Wizard

SELECT
*
FROM
"BOATS","BOATS"

Columns

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

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

Column Order

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

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

OK Cancel

Specify Conditions

Step 3:

Adding conditions

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

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

SQL Wizard

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

ⓘ
⌂
⌂
⌂
⌂
⌂
⌂
⌂

Condition

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

Add New Condition

Back
Next
Finish
Cancel

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

Condition Column

Select a column.

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

Choose the operator type

- The SQL wizard allows you to choose the operator to use in the condition
- The condition shows up both in the SQL 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

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



Condition Value

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

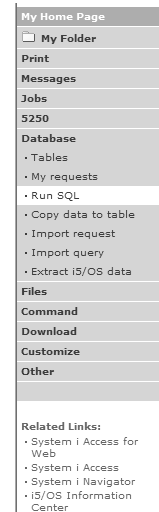
Column > Operator > Value option > [Value]

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

Less than

Value is a constant

Can find values in table



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: 25

Select a value, click OK

Available values:

- 13000
- 19900
- 23900
- 27500
- 55000
- 57500
- 63000
- 69000
- 69950
- 80000
- 149000
- 159900
- 179000
- 179500
- 249000

The statement is complete!

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

SQL Wizard

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

Sort

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

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

Run SQL

SQL Statement

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

SQL Output

Type: **Settings**

Destination: **Settings**

Format

Date:

Time:

Connection

Connection:

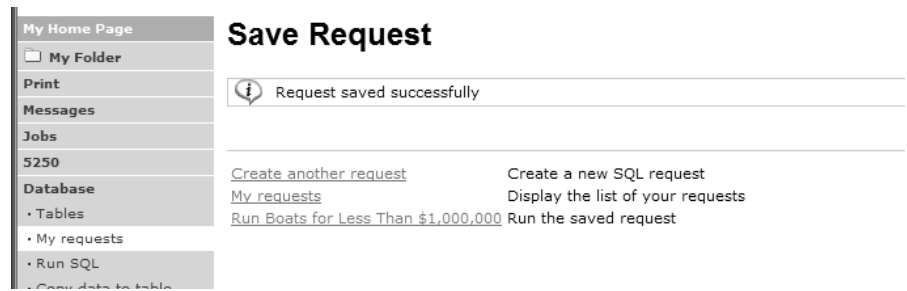
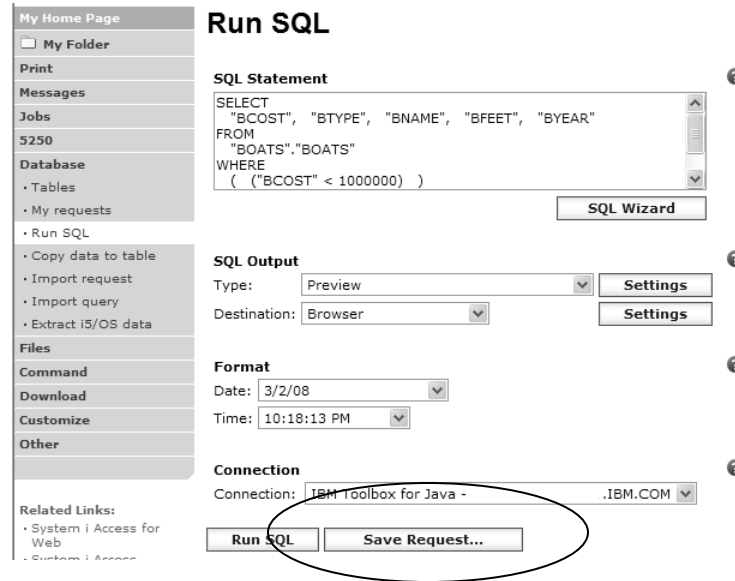
Save the SQL Request

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

My Home Page	<h2>Condition Value Option</h2> <p>Column: BCOST NUMERIC(9) Price in US\$ Operator: Less than or equal to</p> <p><u>Column</u> > <u>Operator</u> > [Value option]</p> <p>Select how the condition value is specified.</p> <p><input type="radio"/> 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.</p> <p><input checked="" type="radio"/> 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.</p> <p> <input type="button" value="Back"/> <input type="button" value="Next"/> <input type="button" value="Apply"/> <input type="button" value="Cancel"/> </p>
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	

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

Condition Prompt - Initial Value

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

Operator: Less than or equal to

Value option: Prompt when request is run

Prompt option: Enter value

1

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

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

Condition Prompt - Layout Settings

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

Operator: Less than or equal to

Value option: Prompt when request is run

Prompt option: Enter value

Layout option: Text only

2

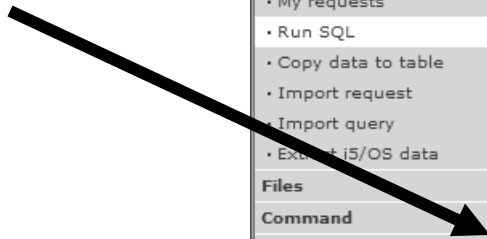
Column > Operator > Value option > Prompt > Option > Initial value > Layout option > [Layout settings]

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

Text contains HTML tags

Can Include Multiple Conditions on Dynamic SQL Requests

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



My Home Page

- My Folder
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- Customize
- Other

SQL Wizard

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

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

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.

[Continue](#)

- 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

Edit SQL Request

SQL Statement

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

[SQL Wizard](#)

SQL Output

Type: [Settings](#)

Destination: [Settings](#)

Format

Date:

Time:

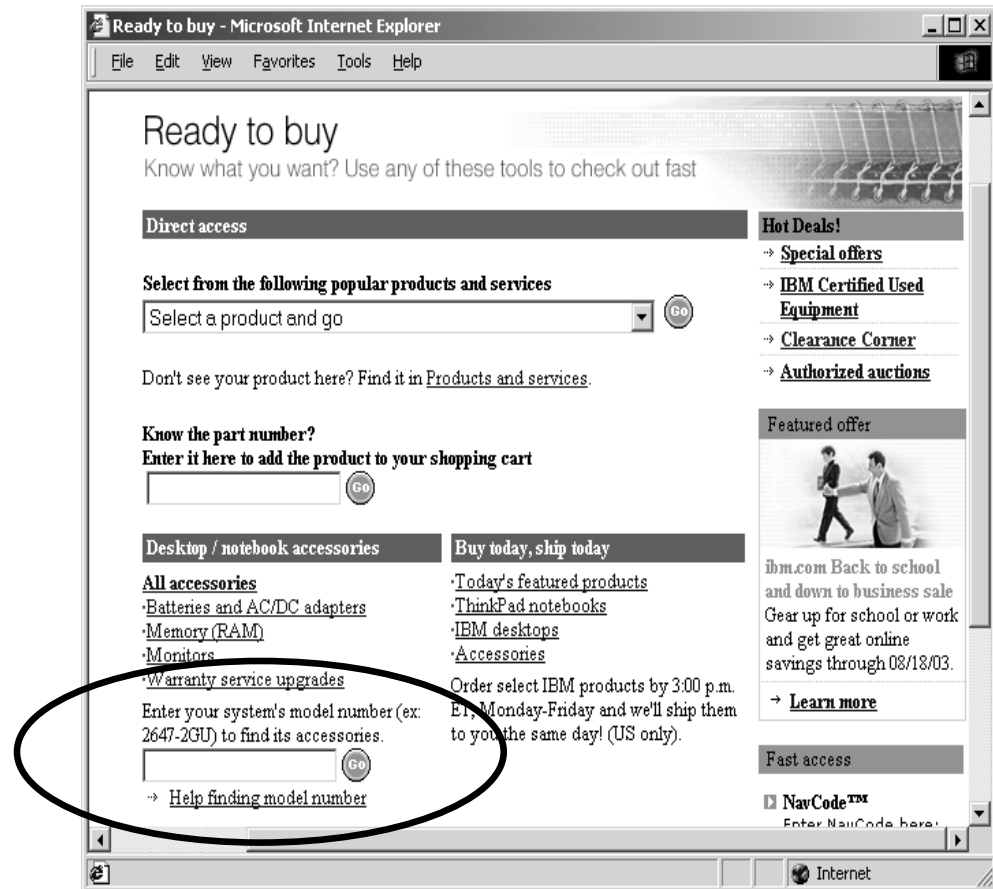
Connection

Connection:

[Run SQL](#) [Save Request...](#)

Dynamic Query – Form Example

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



Great way to add Database requests to your existing web pages



SQL Output Destinations



SQL Output Destinations

Choosing a destination

Choose from 4 different output destinations:

- Browser
- Email
- Personal folder
- Integrated File System

The screenshot shows the IBM SQL Output interface. On the left is a sidebar menu with categories: My Home Page, My Folder, Print, Messages, Jobs, 5250, Database (with sub-items: Tables, My requests, Run SQL, Copy data to table, Import request, Import query, Extract i5/OS data), Files, Command, Download, Customize, and Other. Below the menu are Related Links: System i Access for Web, System i Access.

The main panel is titled "Run SQL" and contains the following sections:

- SQL Statement:** A large text area for entering SQL code, with an "SQL Wizard" button below it.
- SQL Output:** A section with a "Type" dropdown set to "Preview" and a "Settings" button. The "Destination" dropdown is open, showing options: Browser (selected), Integrated File System, Mail as attachment, and Personal folder. There is another "Settings" button below.
- Format:** A section with a "Date" dropdown set to "3/4/05" and a "Time" dropdown set to "1:45:38 PM".
- Connection:** A section with a "Connection" dropdown set to "IBM Toolbox for Java - .IBM.COM".

At the bottom of the main panel are two buttons: "Run SQL" and "Save Request...".

Run SQL – Output Browser

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

A1	A	B	C	D	E	F	G	H	I	J	K	L
	CUSNUM	LSTNAM	INIT	STREET	CITY	STATE	ZIPCOD	CDTLMT	CHGCOD	BALDUE	CDTDUE	
2	938472	Henning	G K	4859 Elm	Dallas	TX	75217	5000	3	37	0	
3	839283	Jones	B D	21B NW 1	Clay	NY	13041	400	1	100	0	
4	392859	Vine	S S	PO Box 7	Broton	VT	5046	700	1	439	0	
5	938485	Johnson	J A	3 Alpine W	Helen	GA	30545	9999	2	3987.5	33.5	
6	397267	Tyron	W E	13 Myrtle	Hector	NY	14841	1000	1	0	0	
7	389572	Stevens	K L	208 Snow	Denver	CO	80226	400	1	58.75	1.5	
8	846283	Alison	J S	787 Lake	Isle	MN	56342	5000	3	10	0	
9	475938	Doe	J W	59 Archer	Sutter	CA	95685	700	2	250	100	
10	693829	Thomas	A N	3 Dove Cir	Casper	WY	82609	9999	2	0	0	
11	593029	Williams	E D	485 SE 2	Dallas	TX	75218	200	1	25	0	
12	192837	Lee	F L	5963 Oak	Hector	NY	14841	700	2	489.5	0.5	
13	583990	Abraham	M T	392 Mill	StIsle	MN	56342	9999	3	500	0	

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

Select	Item	Status	From	Date/Time	Size	Action
<input type="checkbox"/>	SQL output in HTML	Unopened	ihansen	3/4/08 2:00 PM	2587	[Icons]
<input type="checkbox"/>	Status [SQL output in HTML]	Unopened	ihansen	3/4/08 2:00 PM	202	[Icons]

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

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

Directory Contents / JHANSEN

Found 0 directories. Found 3 files with a total size of 10,035 bytes.

Name	Size (bytes)	Type	Modified	Action
../ (Parent Directory)				
sqlOutput.html	2587	File	3/4/08 2:20:52 PM	[Icons]
sqlOutput.pdf	4593	File	3/4/08 2:20:50 PM	[Icons]
sqlOutput.xls	2855	File	3/4/08 2:20:09 PM	[Icons]

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, mail, and integrated file system settings before the request is run

Or you can wait until the request is run

Personal Folder Settings

Item description:

Folder owner:

Always prompt for folder settings when request is run

Mail as Attachment Settings

From: stymie@us.ibm.com

To:

cc:

bcc:

Subject:

Attachment: sqlOutput.

Always prompt for mail settings when request is run

Integrated File System Settings

File:

Replace if exists

Always prompt for file settings when request is run

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
Boats for Less Than \$1,000,000			No	jhsansen	jhsansen
Boats for Sale	View all available boats		No	jhsansen	jhsansen
customers			No	jhsansen	jhsansen
Find a Boat	Dynamic query example		No	jhsansen	jhsansen
Find Boat to Buy	Select type and price limites		No	jhsansen	jhsansen
My Customer Mailing	Mail customer list		No	jhsansen	jhsansen
Put My Customer List in Folder	Store customer list		No	jhsansen	jhsansen
Shortcut to Find Boat to Buy	Select type and price limites		Yes	jhsansen	*PUBLIC
Shortcut to My Customer Mailing	Mail customer list		Yes	jhsansen	*PUBLIC
wa01_public	wa01 All Boats		Yes	wa01adm	*PUBLIC

Related Links:

- [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.

Export Database Requests

Select requests to export.

Select	Request	Description
<input checked="" type="checkbox"/>	customers	
<input type="checkbox"/>	Boats for Sale	View all available boats
<input type="checkbox"/>	Find Boat to Buy	Select type and price limites
<input checked="" type="checkbox"/>	My Customer Mailing	Mail customer list
<input checked="" type="checkbox"/>	Put My Customer List in Folder	Store customer list
<input type="checkbox"/>	Boats for Less Than \$1,000,000	
<input type="checkbox"/>	Find a Boat	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

My Requests

Request	Description	Action	Shortcut	Owner	Access
Shortcut to Boats for Sale	View all available boats	[Icons]	Yes	jhansen	stymie
Shortcut to Find Boat to Buy	Select type and price limites	[Icons]	Yes	jhansen	*PUBLIC
Shortcut to My Customer Mailing	Mail customer list	[Icons]	Yes	jhansen	stymie
Shortcut to My Customer Mailing	Mail customer list	[Icons]	Yes	jhansen	*PUBLIC
Shortcut to Put My Customer List in Folder	Store customer list	[Icons]	Yes	jhansen	stymie
wa01_public	wa01 All Boats	[Icons]	Yes	wa01adm	*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.

Related Links:

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

[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.

1

Import Database Requests

Specify the file containing requests to import.

File:

2

Import Database Requests

File Details

File name: C:\Documents and Settings\Administrator\My Documents\myDBRequests.requests
Requests: 3

Select requests to import.

Note: Since connection information is not exported with the requests, verifying the selected connection for each request is strongly recommend. Selecting an incorrect connection could cause the request to fail, or data to be lost, when the request is run.

Select	Request	Description	Owner	Target Request	Connection
<input checked="" type="checkbox"/>	customers		jhansen	customers	IBM Toolbox for Java - .ibm.com
<input checked="" type="checkbox"/>	My Customer Mailing	Mail customer list	jhansen	My Customer Mailing	IBM Toolbox for Java - .ibm.com
<input checked="" type="checkbox"/>	Put My Customer List in Folder	Store customer list	jhansen	Put My Customer List in	IBM Toolbox for Java - .ibm.com

3

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

My Requests

Request	Description	Action	Shortcut	Owner	Access
Customers		[Icons]	No	jrhuser1	jrhuser1
Inventory		[Icons]	No	jrhuser1	jrhuser1
Shortcut to Find Boat to Buy	Select type and price limites	[Icons]	Yes	jhansen	*PUBLIC
Shortcut to My Customer Mailing	Mail customer list	[Icons]	Yes	jhansen	*PUBLIC
wa01_public	wa01 All Boats	[Icons]	Yes	wa01adm	*PUBLIC

Transfer Request

Request name:

Profile:

My Requests

Request	Description	Action	Shortcut	Owner	Access
Customers		[Icons]	No	jrhuser1	jrhuser1
Inventory		[Icons]	No	jrhgroup	jrhgroup
Shortcut to Find Boat to Buy	Select type and price limites	[Icons]	Yes	jhansen	*PUBLIC
Shortcut to My Customer Mailing	Mail customer list	[Icons]	Yes	jhansen	*PUBLIC
wa01_public	wa01 All Boats	[Icons]	Yes	wa01adm	*PUBLIC

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	Action	Shortcut	Owner	Access
Boats for Less Than \$1,000,000			No	jhansen	jhansen
Boats for Sale	View all available boats		No	jhansen	jhansen
customers			No	jhansen	jhansen
Find a Boat	Dynamic query example		No	jhansen	jhansen
Find Boat to Buy	Select type and price limites		No	jhansen	jhansen
My Customer Mailing	Mail customer list		No	jhansen	jhansen
Put My Customer List in Folder	Store customer list		No	jhansen	jhansen
Shortcut to Find Boat to Buy	Select type and price limites		Yes	jhansen	*PUBLIC
Shortcut to My Customer Mailing	Mail customer list		Yes	jhansen	*PUBLIC
wa01_public	wa01 All Boats		Yes	wa01adm	*PUBLIC

Create Automated Task

Request: customers
 User profile: jhansen
 Password:
 Confirm password:
 Output file: sqlOutput.csv
 Java archive: iWATask.jar

Create Automated Task

Automated task created successfully.

Request: customers
 User profile: jhansen
 Output file: customers.csv
 Java archive: CustomersTask.jar

[CustomersTask.jar](#) Download automated task Java archive

```

C:\Documents and Settings\Administrator>cd "My Documents"
C:\Documents and Settings\Administrator\My Documents>java -jar CustomersTask.jar
Processing property file task.properties
Connecting to http://ibm.com:2020/webaccess/iWADbExec?request=customers
Connection completed, waiting for a response...
Connection response code: 200
Connection response code message: OK
The URL connection completed successfully.
Returned content type: application/x-und.ibm.QiVA.binary
Output being written to: customers.csv
Total bytes written to output file: 994
Processing completed for property file task.properties
C:\Documents and Settings\Administrator\My Documents>start customers.csv
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

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Database

- Tables
- My requests
- Run SQL
- Copy data to table
- Import request
- Import query
- Extract i5/OS data

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Other

Related Links:

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

My Requests

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

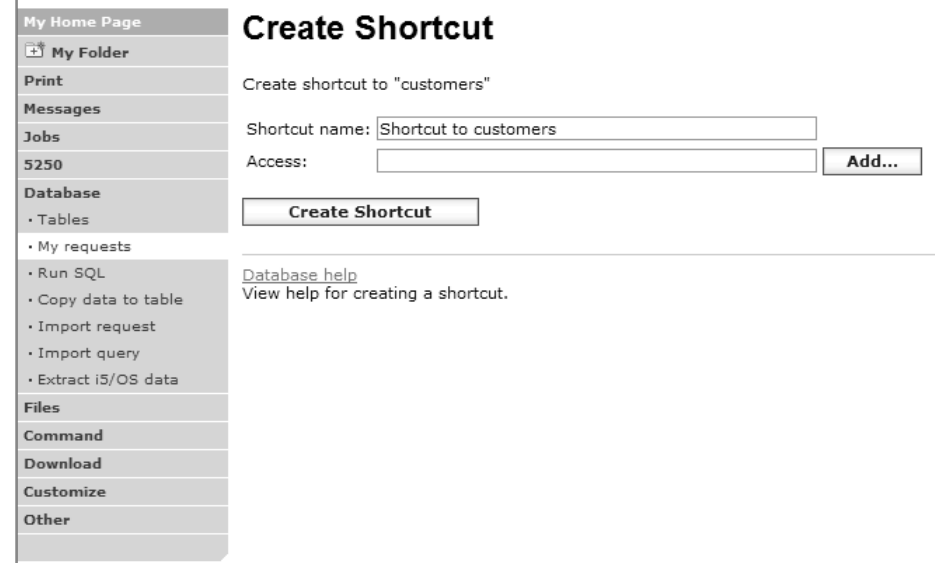
Shortcuts – giving users access

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: **Add...**

Create Shortcut

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

Set Policies for Requests/Shortcuts

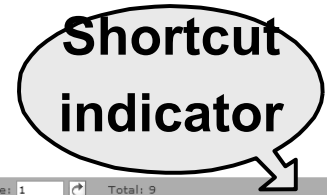
Policies work on i5/OS User Profiles – Users and Groups

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



My Requests

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

Page 1 of 1 Jump to page: 1 Total: 9

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.

Related Links:

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

User can only run shortcuts previously built by someone else

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- Database
 - [My requests](#)
 - Run SQL
- Files
- Download

Related Links:

- [System i Access for Web](#)
- [System i Access](#)
- [System i Navigator](#)
- [i5/OS Information Center](#)
- [System i Resource Center](#)

My Requests

Page 1 of 1
Jump to page:
Total: 5

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

Page 1 of 1
Jump to page:
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[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.

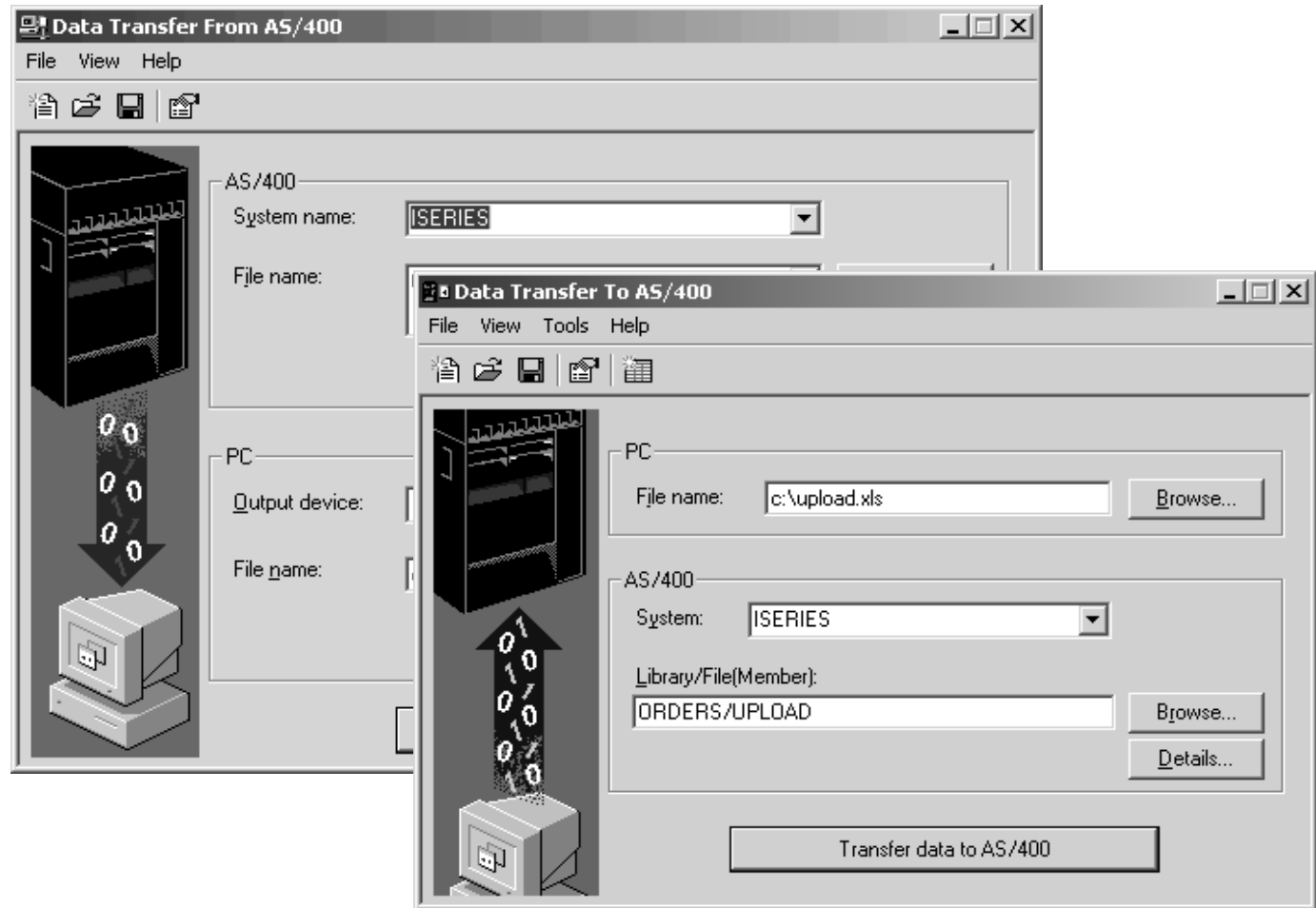
[Database help](#)
View help for working with database requests.

Import Requests and Import Queries



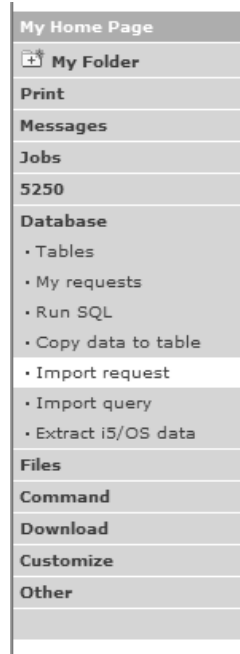
Importing Client Access Data Transfer Requests

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 Client Access Data Transfer Request

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

Note: The converted System i 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:

[Database help](#)

View help for importing Data Transfer requests.

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)

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Import Query

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

Note: The converted System i 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:


Query type:

Query file CCSID:

[Database help](#)
View help for importing queries.

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

Extract i5/OS Data

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• Tables
• My requests
• Run SQL
• Copy data to table
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• Import query
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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.

Extract i5/OS Object Data

Object Data to Extract ?
 Objects: ▼

Table to Receive Data ?
 Table:
 Replace table if table exists

Extract Results ?
 Output: ▼

Connection ?
 Connection: ▼

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

Extract i5/OS Object Data

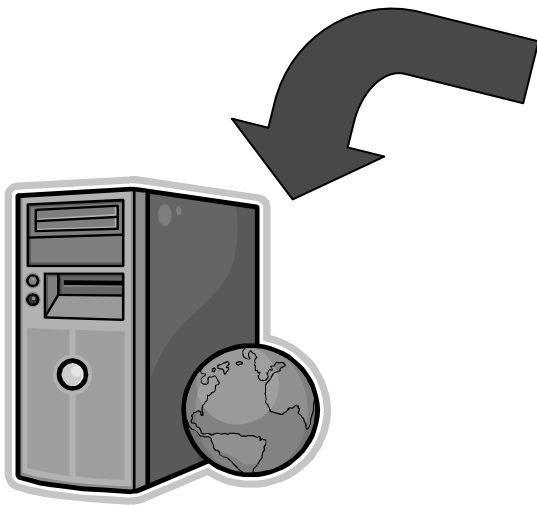
Extract i5/OS Object Data can be used to retrieve information about i5/OS objects and store the results in a database table

- 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

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- Extract i5/OS data

Tables

Connection: IBM Toolbox for Java - .IBM.COM

Table filter: *USRLIBL, BOATS

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Table	Description	Action
BOATS.BOATS	Available BOATS	[Icons]
BOATS.BOATS1	Available boats by length	[Icons]
BOATS.PCFILS	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 ?

[Icon]	[Icon]	[Icon]	[Icon]	[Icon]	[Icon]
[Icon]	[Icon]	[Icon]	[Icon]	[Icon]	[Icon]
[Icon]	[Icon]	[Icon]	[Icon]	[Icon]	[Icon]
[Icon]	[Icon]	[Icon]	[Icon]	[Icon]	[Icon]
[Icon]	[Icon]	[Icon]	[Icon]	[Icon]	[Icon]

Working with Tables

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Database

- Tables
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- Copy data to table
- Import request
- Import query
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Related Links:

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

Tables

Connection: IBM Toolbox for Java - .IBM.COM

Table filter: *USRLIBL, BOATS

Page 1 of 11 Jump to page: Total: 262

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		
QBLDSYS.CBVTBATS	BVT test case file	
QBLDSYS.CBVTCQRY	BVT test case file	
QBLDSYS.CBVTDERI	BVT test case file	
QBLDSYS.CBVTDLO	BVT test case file	
QBLDSYS.CBVTFORM	BVT test case file	
QBLDSYS.CBVTGRPD	BVT test case file	
QBLDSYS.CBVTGRPS	BVT test case file	
QBLDSYS.CBVTJOB	BVT test case file	
QBLDSYS.CBVTJOIN	BVT test case file	

Connection & Table Filter

Table Actions

Insert

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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.

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Customize

- Preferences
- Policies
- Settings
- Transfer configuration

Other

Related Links:

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

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	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
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...

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

Tables → Find Record

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

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Database

- Tables
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Find Record

Page 1 of 1
Jump to page:
Total: 2

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

Page 1 of 1
Jump to page:
Total: 2

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

**Wildcards
may be used
in the
selection**

2

Records to Update

Page 1 of 1 Jump to page: 1 Total: 2

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

Page 1 of 1 Jump to page: 1 Total: 2

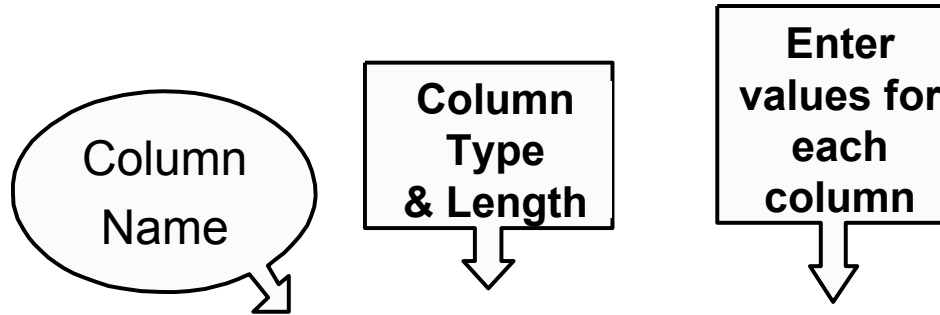
3

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="Poole Boat Co Aluminum"/>	boat name
BFEET	NUMERIC (3,0)	<input type="text" value="80"/>	Length in feet
BYEAR	NUMERIC (4,0)	<input type="text" value="1979"/>	Year built
BCOST	NUMERIC (9,0)	<input type="text" value="1000000"/>	Price in US\$
BNT01	CHAR (72)	<input type="text" value="-Located in S. Diego, CA"/>	Note 1
BNT02	CHAR (72)	<input type="text" value="-Twin Detroit diesels."/>	Note 2

Inserting New Records into A Table



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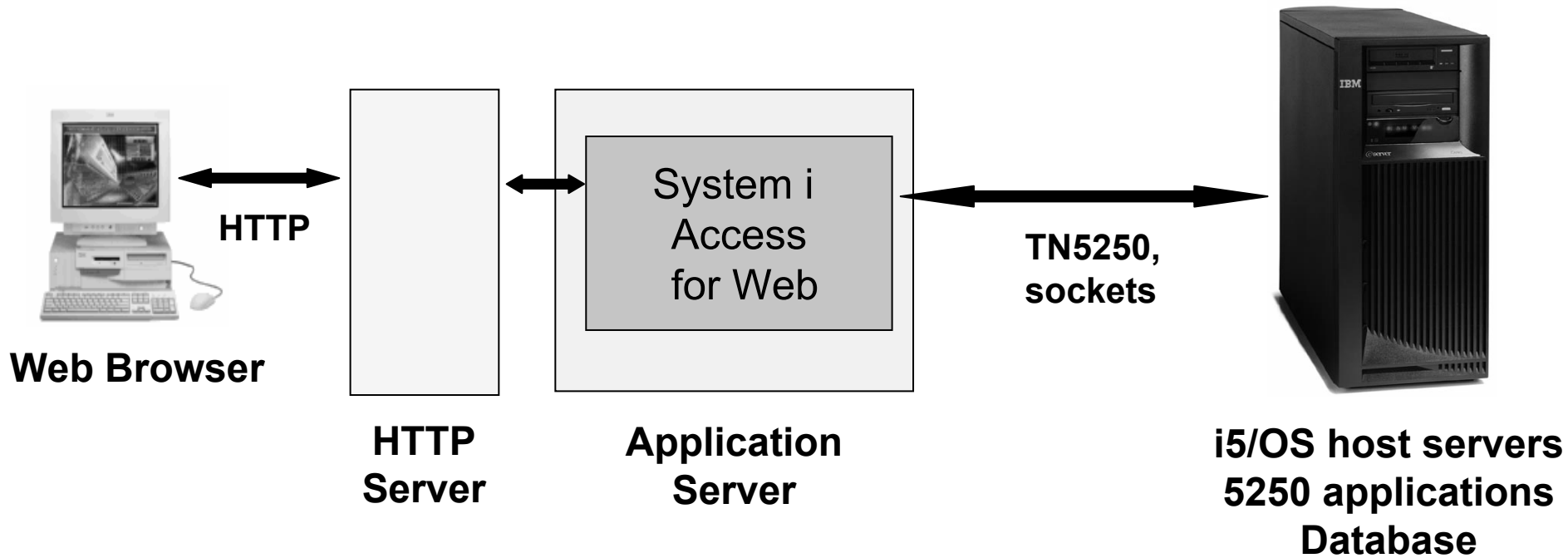
Insert Record

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

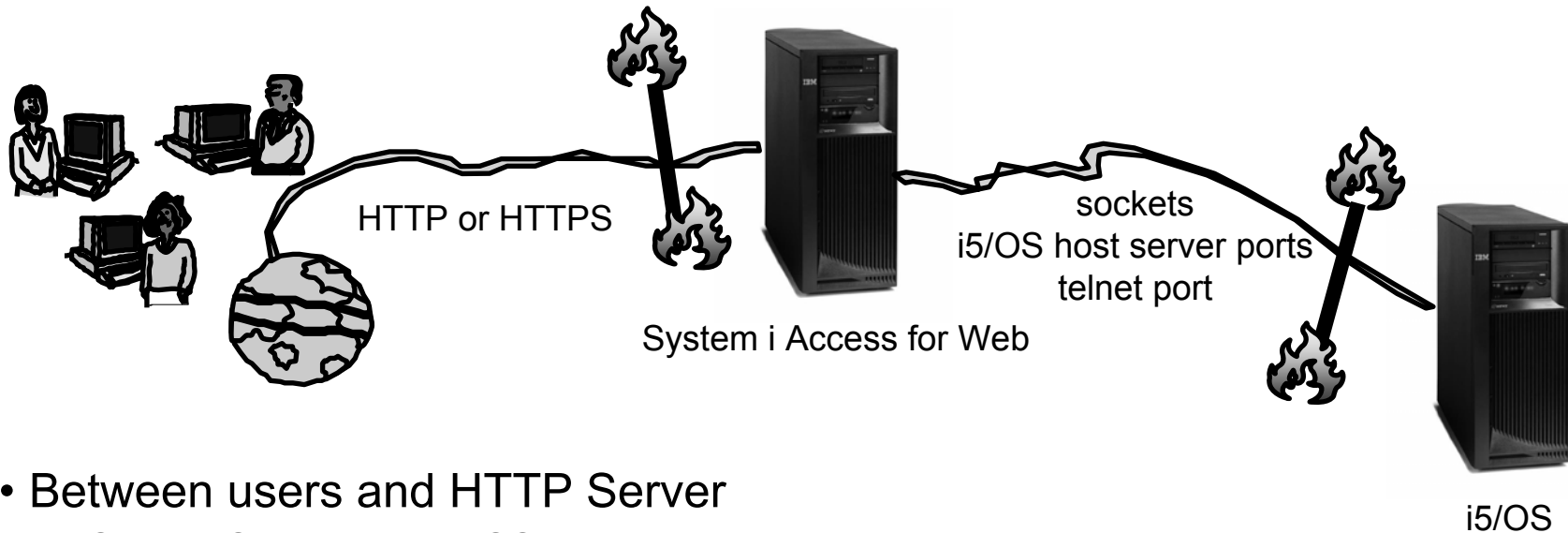
Column	Type	Value	Description
BTYPE	CHAR (1)	<input type="checkbox"/>	P=Powered S=Sailing
BNAME	CHAR (30)	<input type="text"/>	boat name
BFEET	NUMERIC (3,0)	<input type="text" value="0"/>	Length in feet
BYEAR	NUMERIC (4,0)	<input type="text" value="0"/>	Year built
BCOST	NUMERIC (9,0)	<input type="text"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

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- Other

Policies

Profile: JHANSEN

Action	Category	Description	Access ?
	5250	5250 user interface custom settings.	Allowed
	Command	Run batch command custom settings.	Allowed
	Customize	Preferences and policy administration custom settings.	Allowed
	Database	Database tables, requests, and run SQL custom settings.	Allowed
	Database connections	Create and edit database connection definitions.	Allowed
	Download	Download packages custom settings.	Allowed
	Files	Integrated file system and file share custom settings.	Allowed
	General	Page layout, language and character set custom settings.	Allowed
	Jobs	Work with jobs custom settings.	Allowed
	Mail	Send mail custom settings.	Allowed
	Messages	Display messages, send messages, and message queue custom settings.	Allowed

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)

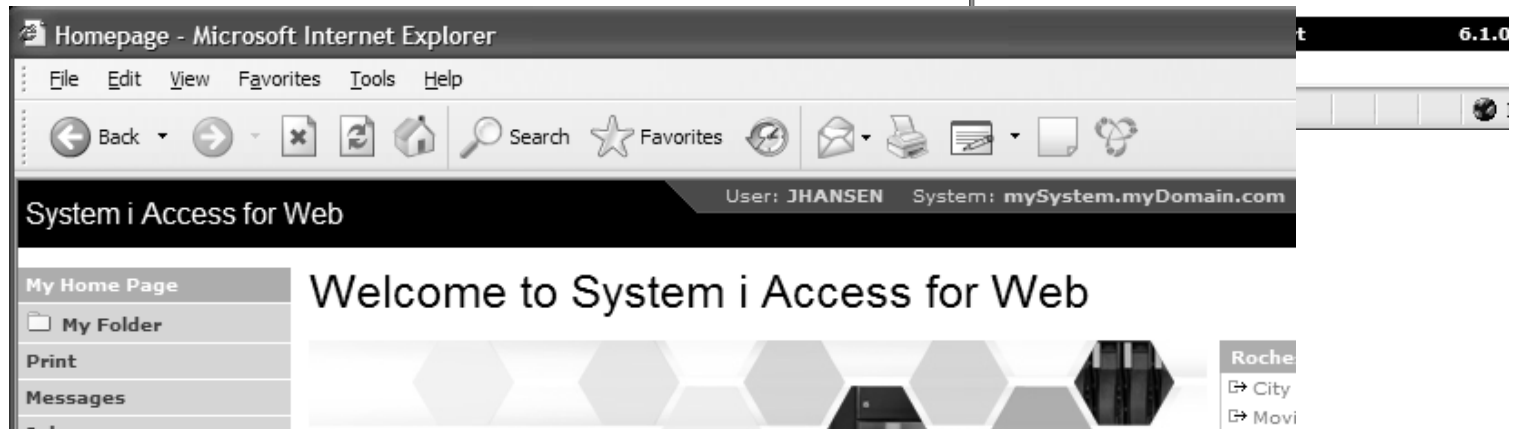
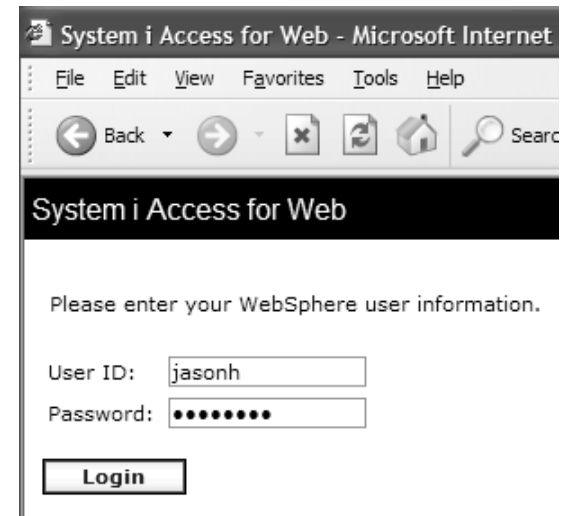


Application Server Authentication Authorization

- 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 ?

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

Start Session

Sign On

System : QINTER
 Subsystem : QPADEV0006
 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.

(C) COPYRIGHT IBM CORP. 1980, 2003.

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

Start Session

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

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

Start Session

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:

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



The screenshot shows the 'HTTP Server Administration' window for 'IWA51BASE - Apache' in 'Global configuration'. The 'WebSphere Application Server' configuration page is displayed, showing the 'General' tab. The 'WebSphere instance' is set to 'iwa51base'. Two dropdown menus are highlighted with arrows, both set to 'Yes', indicating the configuration for starting and stopping the application server.

WebSphere Application Server

General

This HTTP server is currently associated with application server "iwa51base, V5.1 Base".

Disable Servlets and JSPs (Java Server Pages)
 WebSphere Application Server, V6.0 ND
 WebSphere Application Server, V6.0
 WebSphere Application Server, V5.1 Base

WebSphere instance:

Start all WebSphere application server(s) for the associated WAS instance when this HTTP server is started:

Stop all WebSphere application server(s) for the associated WAS instance when this HTTP server is stopped:

WebSphere Application Server, V5.1 Express

OK Apply Cancel Preview

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>)**

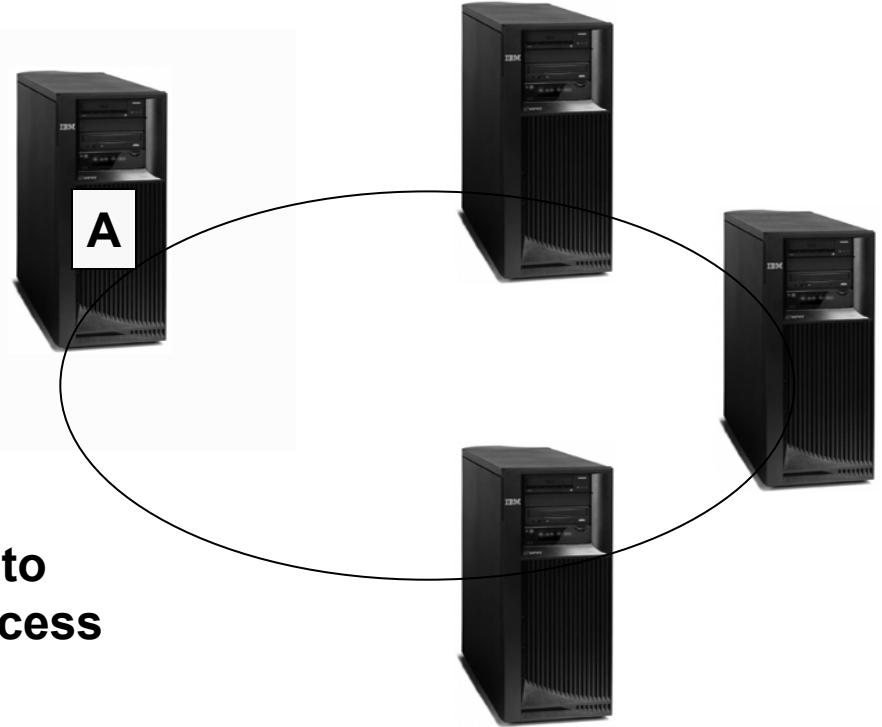
E.g. HTTP server name IWA51BASE

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

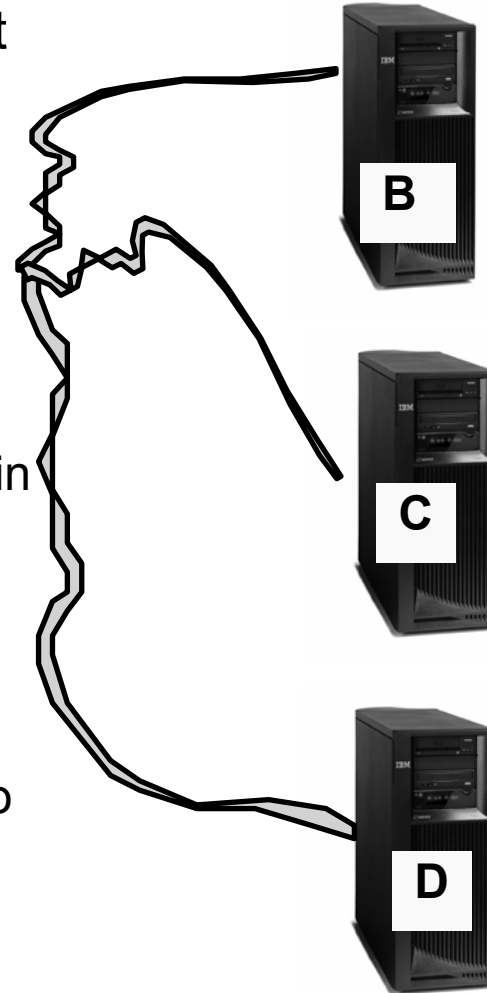
- Database

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

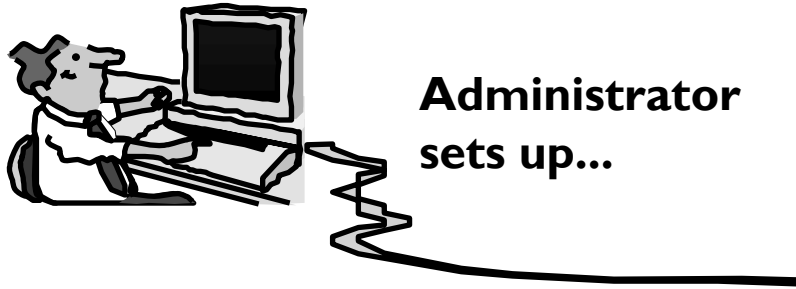


Accessing Multiple iSeries Systems

- 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



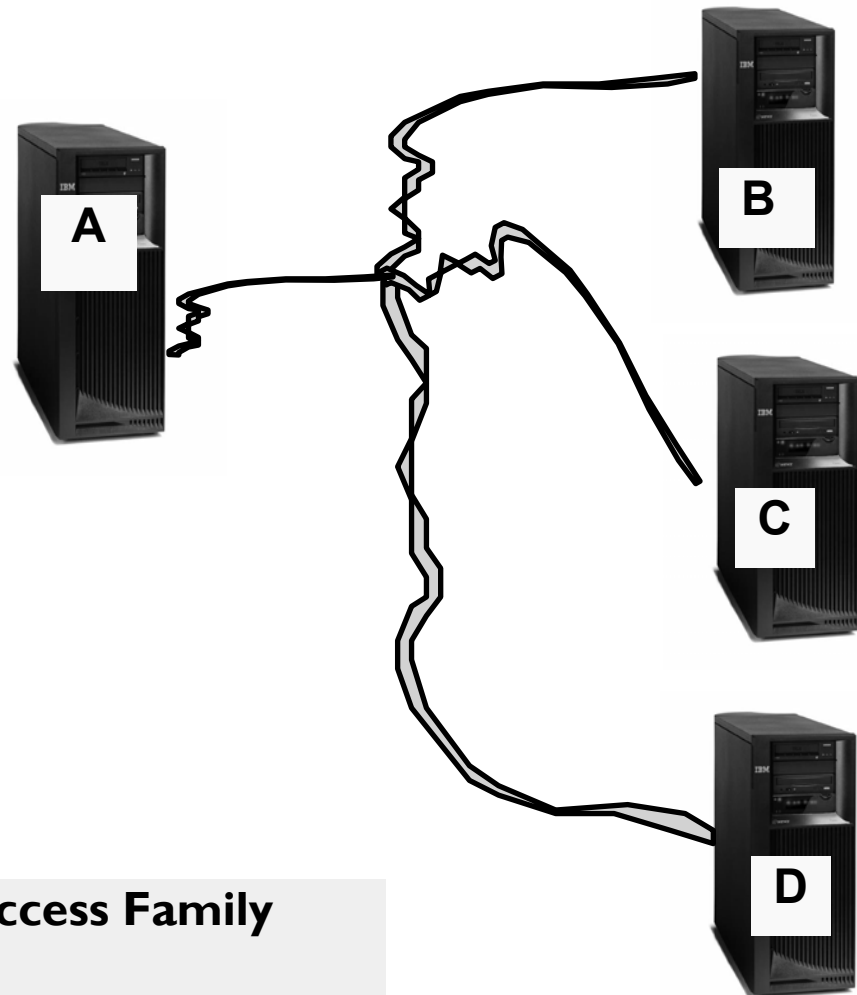
System A is added

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

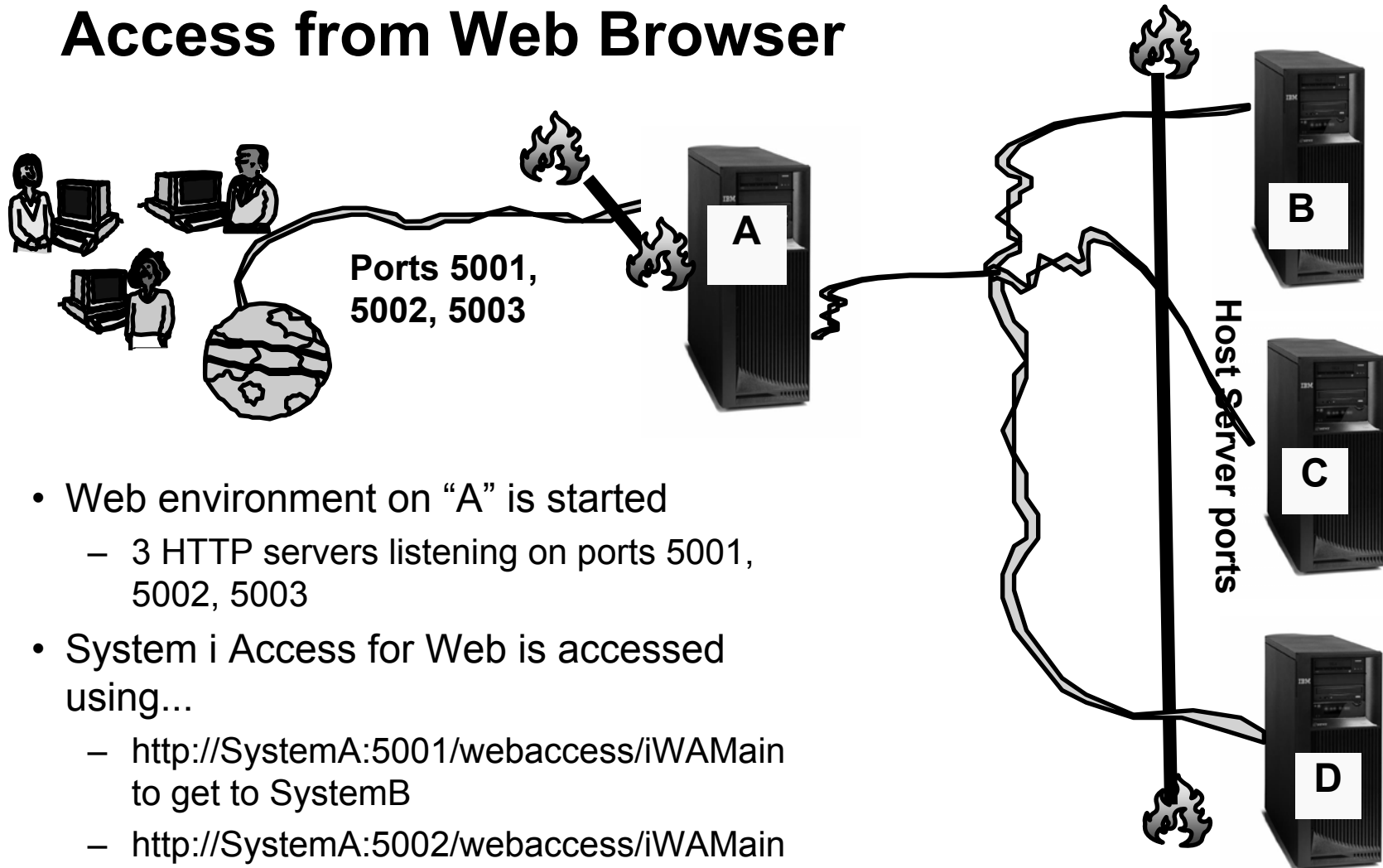


Setting up System A



- 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/<appsvrtype>/<wasinst>/<appsvr>/config/webaccess.properties
 - For Tomcat:
/QIBM/UserData/Access/Web2/<appsvrtype>/<tcsvrname>/config/webaccess.properties

Access from Web Browser



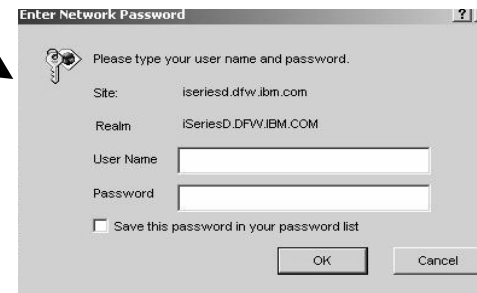
- Web environment on “A” is started
 - 3 HTTP servers listening on ports 5001, 5002, 5003
- System i Access for Web is accessed using...
 - `http://SystemA:5001/webaccess/iWAMain` to get to SystemB
 - `http://SystemA:5002/webaccess/iWAMain` to get to SystemC
 - `http://SystemA:5003/webaccess/iWAMain`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

Please note:

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

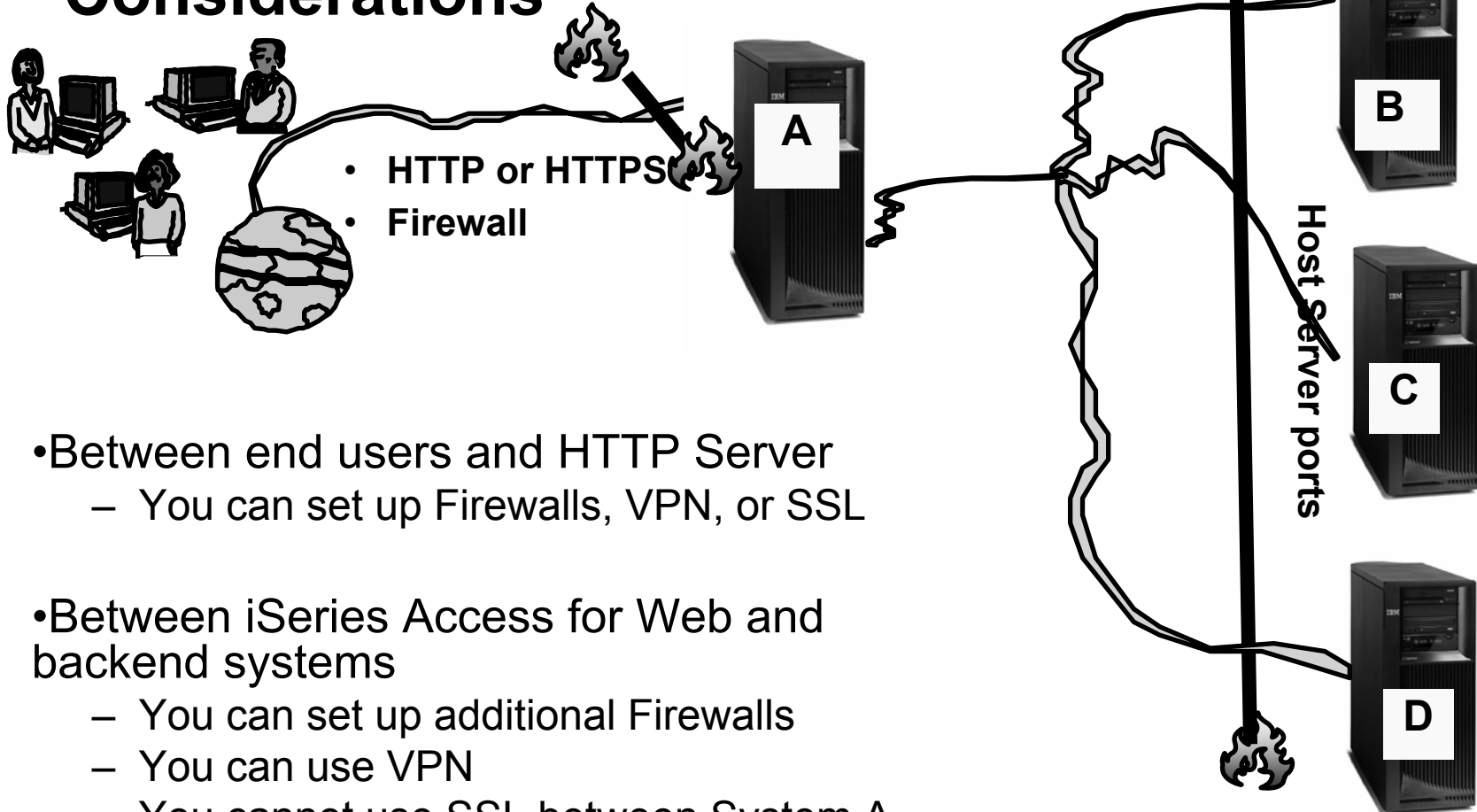
User starts browser and keys in url address...

- 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

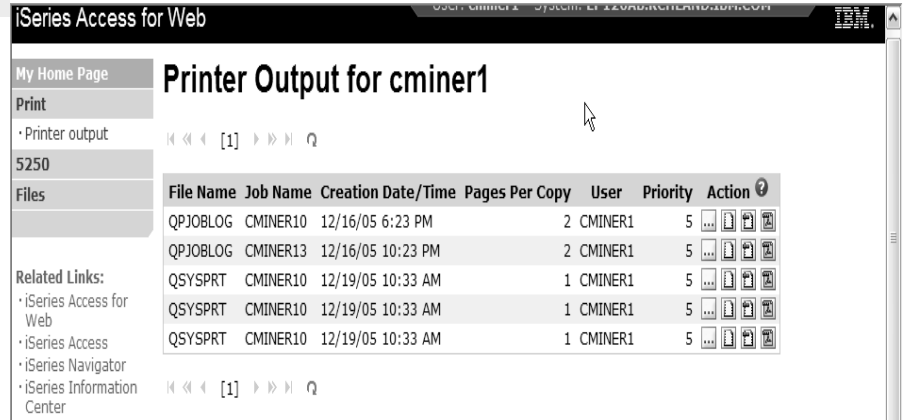


Tip – Displaying printer output for other users

Printer Output

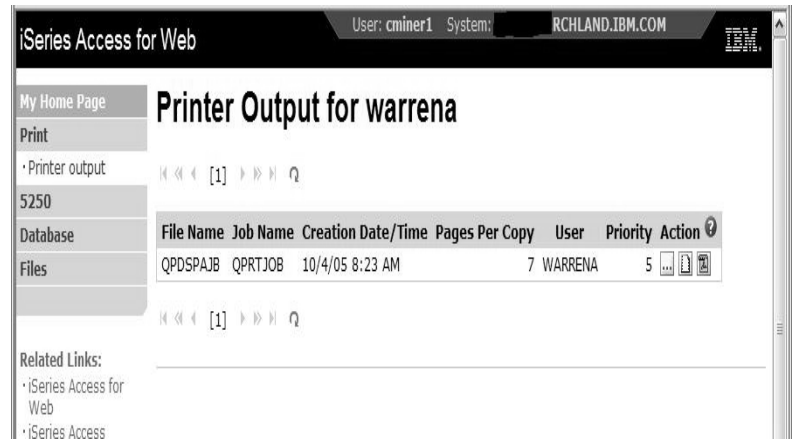
1

- 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)

2

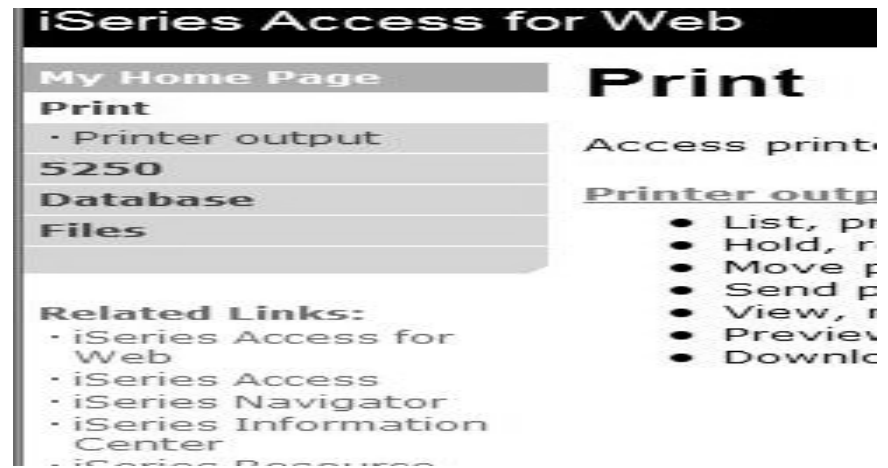


Must have the proper authority to see other user's spooled files

Tips – Setting up policies

Recommendations for Setting Up Policies

- Do as much customization as you can using *PUBLIC
- 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
- Create some 'Groups' of users and apply more specific customization
- 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

Printer Output for cminer

File Name	User	Creation Date/Time	Pages Per Copy	Copies	Status	Action	User	Job Name	Number	File Name
QSYSVRT		12/15/05 4:31 PM	1	1	Ready	[...]	CMINER	CMINER0	502274	
QSYSVRT		12/15/05 4:31 PM	1	1	Ready	[...]	CMINER	CMINER0	502274	
QSYSVRT		12/15/05 4:32 PM	1	1	Ready	[...]	CMINER	CMINER0	502274	
QSYSVRT		12/15/05 4:39 PM	1	1	Ready	[...]	CMINER	CMINER0	502274	
QSYSVRT		12/15/05 4:41 PM	1	1	Ready	[...]	CMINER	CMINER0	502274	
QPRINT		12/15/05 4:48 PM	1	1	Ready	[...]	CMINER	QIWAPDFSTR	502281	
QPRINT		12/15/05 4:50 PM	1	1	Ready	[...]	CMINER	QIWAPDFSTR	502285	
QPRINT		12/15/05 4:52 PM	1	1	Ready	[...]	CMINER	QIWAPDFSTR	502287	
QPRINT		12/15/05 4:57 PM	1	1	Ready	[...]	CMINER	QIWAPDFSTR	502291	



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

Printer Output for cminer1

File Name	Job Name	Creation Date/Time	Pages Per Copy	User	Priority	Action
QPJOBLOG	CMINER10	12/16/05 6:23 PM	2	CMINER1	5	[...]
QPJOBLOG	CMINER13	12/16/05 10:23 PM	2	CMINER1	5	[...]
QSYSVRT	CMINER10	12/19/05 10:33 AM	1	CMINER1	5	[...]
QSYSVRT	CMINER10	12/19/05 10:33 AM	1	CMINER1	5	[...]
QSYSVRT	CMINER10	12/19/05 10:33 AM	1	CMINER1	5	[...]

Work with Specific User Profile To Set Policy for IFS

- Set a 'Default Directory' for a specific user

Directory Contents /CMINER1

Found 0 directories. Found 4 files with a total size of 13,928,795 bytes.

Name	Size (bytes)	Type	Modified	Action
AMP23 Use iSeries Access for iSeries Database Access.ppt	12799488	File	12/19/05 11:32:18 AM	[Icons]
ASJ_2005 NovDec_A new beta is out for iSeries Access for Web.doc	873472	File	12/19/05 11:29:19 AM	[Icons]
ISN_2005 Dec_Cool Tips about iSeries Access.doc	158208	File	12/19/05 11:30:36 AM	[Icons]
V5R4 iSeries Access for Web RUN SQL Output Options.JPG	97627	File	12/19/05 11:31:34 AM	[Icons]

Copy Files to Server

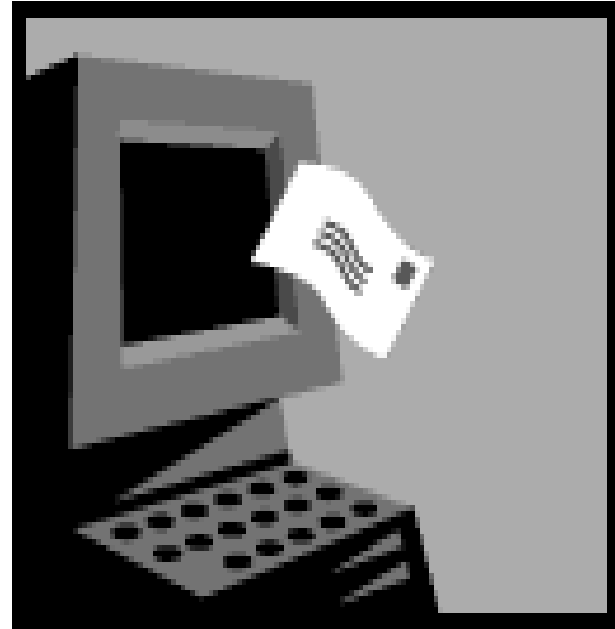
In this example, I went into CMINER1 profile, and set policy to show only the 'CMINER1' directory to this user...

Edit Policies - Files

Profile: CMINER1

Policy	Derived From	Action	Setting
Files access	Shipped default	Use current setting	Allow
Files tab	Shipped default	Use current setting	Show
Display directory contents in new window	Shipped default	Use current setting	No
Enable sort links for directory contents	Shipped default	Use current setting	Yes
Display directory contents statistics	Shipped default	Use current setting	Yes
Browse files	Profile setting	Use current setting	Allow
Copy files to server	Shipped default	Use current setting	Allow
Copy files from server	Shipped default	Use current setting	Allow
Default directory	Profile setting	Use current setting	/cminer1
Display subdirectory contents	Shipped default	Use current setting	Allow
Display parent directory contents	Shipped default	Use current setting	Allow
Display default	Shipped default	Use current setting	Deny

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'

Run SQL

SQL Statement

```
SELECT *
FROM "QGPL"."QSALEREC"
```

SQL Wizard

SQL Output

Type: Preview

Destination: Browser

Format: Mail as attachment

Date: 1/20/05

Time: 3:08:57 PM

Mail output

PDF Output Settings

Destination: Browser

Mail as attachment

Personal folder

Output Queue

Directory Contents / CMINER

Found 0 directories. Found 3 files with a total size of 15,136,488 bytes.

Name ^	Size (bytes)	Type	Modified	Action
../ (Parent Directory)				
ODBC_V5R4.zip	15133129	File	12/22/05 3:21:39 PM	
sqlOutput.html	816	File	12/12/05 5:35:42 PM	
sqlOutput.pdf	2543	File	12/12/05 5:38:59 PM	

IFS File System

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

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

Edit Policies - Mail

Profile: *PUBLIC

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 ▼

1

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 ▼

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

Edit Preferences - Mail

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

[Preferences help](#)
 View help for editing preferences.

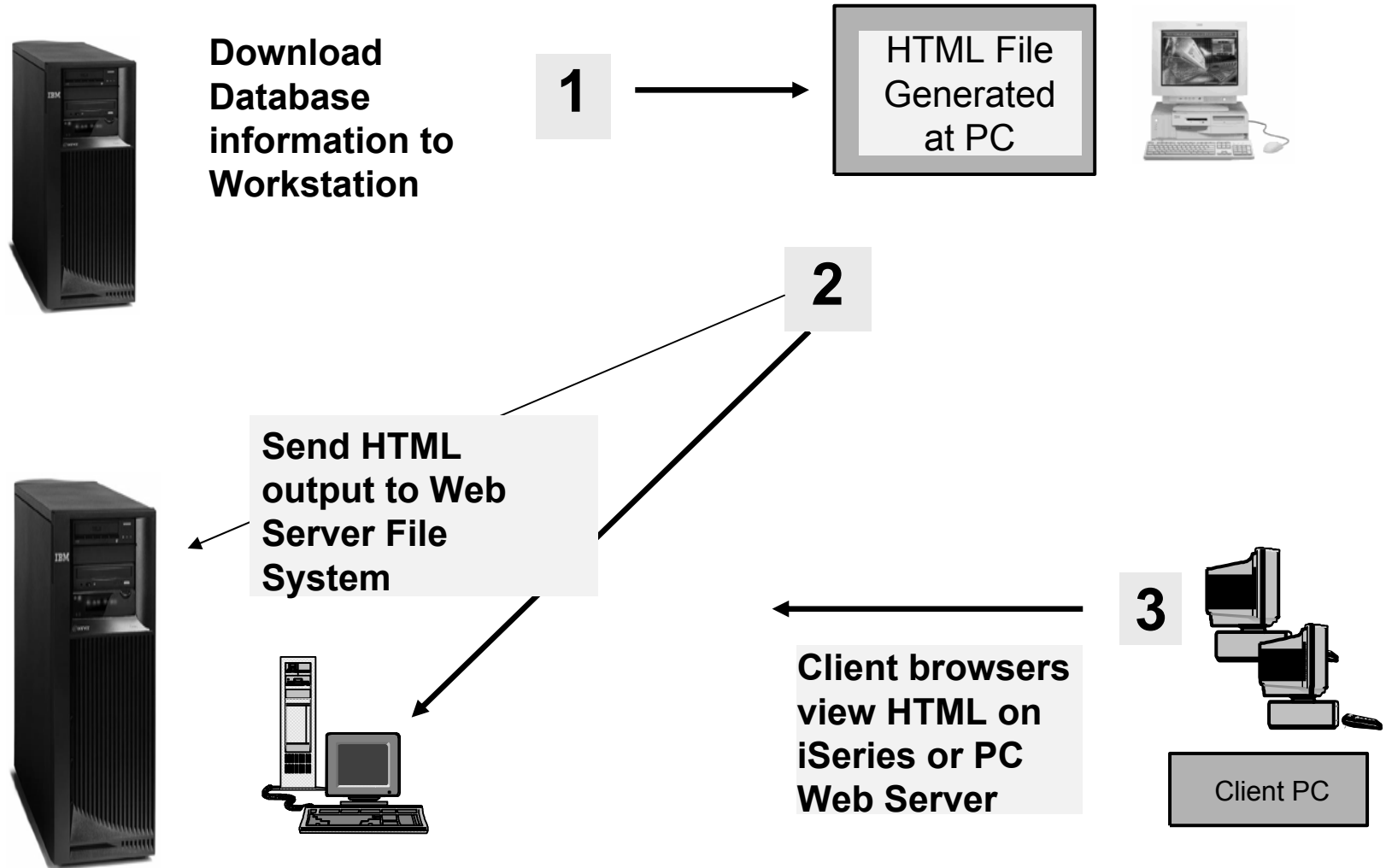
2

Questions?

Appendix A: HTML Output Types

Use HTML File support

Updating a Web server



HTML Output Settings

- Many settings from:
- Caption
- Table
- Cell 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

Related Links:

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

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

Template ?

File:

Tag:

General ?

Character set:

Maximum rows:

Displaying output in a paged list

iSeries Access for Web (continued)

• Run SQL

• Copy data to table

• Import request

• Import query

• Extract i5/OS data

Files

Command

Download

Customize

Other

Table

Alignment:

Rows per table:

Table width:

Border width:

Cell spacing between cells:

Cell padding within cells:

Cell data:

Include column headings

Data Settings

Heading Settings

- ❑ Specify a value for 'Rows per table' to limit the number of rows displayed on a 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 i5/OS data

Files

Command

Download

Customize

Other

SQL Output

« « « [1] 2 » » » 🔍

	BCOST	BTYPE	BNAME	BFET	BYEAR
Jobs	100000000	A	Hangar	20	1940
5250	100000000	A	Spandau1	72	2000
Database	100000000	A	MOLSLINIEN	300	1999
• Tables	100000000	A	Spandau	720	1999
• My requests	1000000	C	Poole Boat Co Aluminum	80	1979
• Run SQL	13000	P	Mako 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 i5/OS data	2975000	P	Monterey Marine Custom	80	1996
Files	100000000	P	Katemeran	200	1995
Command	69950	S	Corsair 27	27	1994
Download	57900	S	Hunter 33.5	33	1990
Customize	27500	S	Bill Garden Schooner	36	1953
Other	179500	S	Fontaine Pajot Antigua	37	1993

« « « [1] 2 » » » 🔍

Contrasting other layouts

Customer Informati...

CUSNUM	LSTNAM	INIT	STREET	CITY	STATE	ZIPC
938472	Henning	G K	4859 Elm Ave	Dallas	TX	7521
839283	Jones	B D	21B NW 135 St	Clay	NY	1304
392859	Vine	S S	PO Box 79	Broton	VT	5046
938485	Johnson	J A	3 Alpine Way	Helen	GA	3054
397267	Tyron	W E	13 Myrtle Dr	Hector	NY	1484
389572	Stevens	K L	208 Snow Pass	Denver	CO	8022
846283	Alison	J S	787 Lake Dr	Isle	MN	5634
475938	Doe	J W	59 Archer Rd	Sutter	CA	9568
693829	Thomas	A N	3 Dove Circle	Casper	WY	8260
593029	Williams	E D	485 SE 2 Ave	Dallas	TX	7521
192837	Lee	F L	5963 Oak St	Hector	NY	1484
583990	Abraham	M T	392 Mill St	Isle	MN	5634



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



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

SQL Output

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

CUSNUM	LSTNAM	INIT	STREET	CITY	STATE	ZIPCOD
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	Johnson	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

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
Other

Cell data:

Include column headings

Template

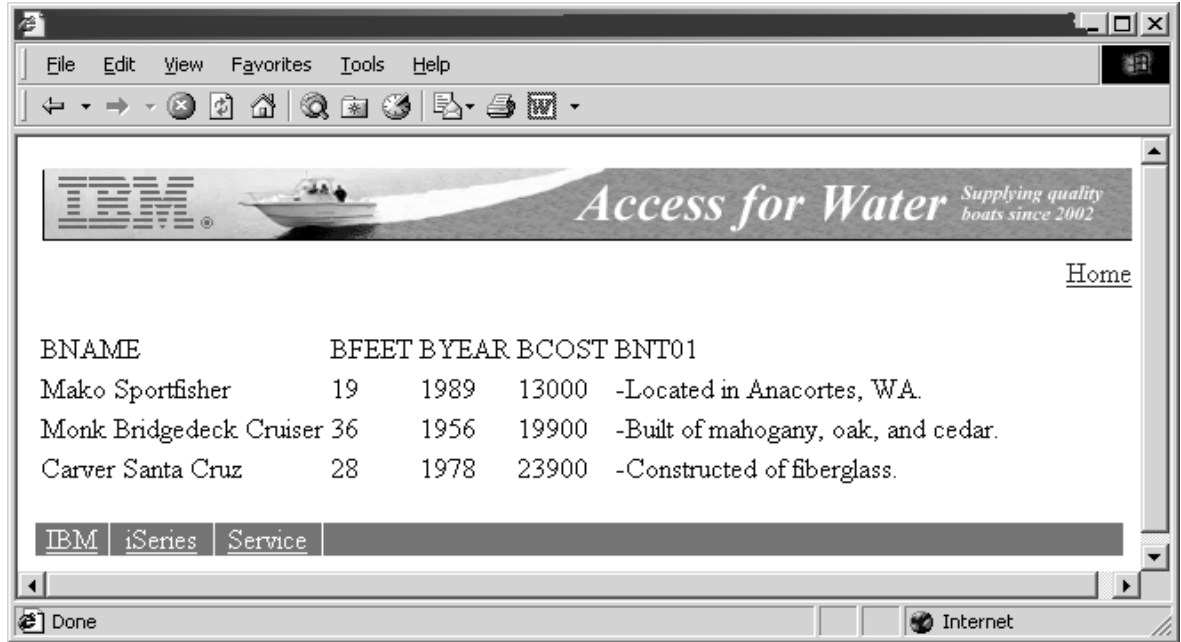
File:

Tag:

General

Character set:

Maximum rows:



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
<ul style="list-style-type: none"> • Comma Separated Variable • Data Interchange Format • Extensible Markup Language (XML) • Hyper Text Markup Language (HTML) (on downloads) • No conversion • ASCII Text • Text – Tab delimited • Text - Delimited • Basic Random • Basic Sequential • DOS Random • DOS Random Type 2 	<p style="text-align: center;">Yes Yes Yes Yes No Yes Yes Yes No No No No</p>	<p style="text-align: center;">Yes Yes Yes Yes Yes Yes Yes No Yes Yes Yes Yes</p>

Supported File Formats (continued)

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

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

Request Types

iSeries Access for Web	iSeries Access for Windows
<p>Database Requests From 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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