IBM

Session: **33A**

2007 System i and AS/400 Connection Conference

System i Access for Web: Database Access

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i want stress-free IT.
   i want control.
       i want an i.

Abstract

System i Access for Web provides web-based access to System i resources through a browser.

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

In this session, attendees will learn how to:

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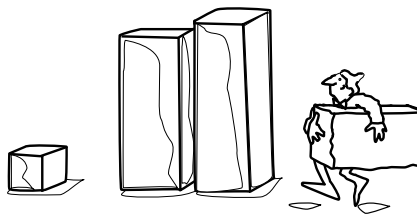
Requirements?

- **Would you like to see some other features in our iSeries Access Family?**

- **Please submit requests for enhancements via the FITS system.**

- **Go to the iSeries Access home page:**

- **http://www.ibm.com/eserver/iseries/access/**
- **And click on link "Request for Design Change"**

This really helps development get new functions into the planning process

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Packaging & Ordering

System i Access Family Packaging

V5R4 5722-XW1 iSeries Access Family	V5R3 5722-XW1 iSeries Access Family
• iSeries Access for Windows, 5722-XE1, V5R4	• iSeries Access for Windows, 5722-XE1, V5R3
• iSeries Access for Web, 5722-XH2, V5R4	• iSeries Access for Web, 5722-XH2, V5R3
• iSeries Access for Linux, 5722-XL1	• iSeries Access for Linux, 5722-XL1, V1.10
• iSeries Access for Wireless, 5722-XP1, V5R4	• iSeries Access for Wireless, 5722-XP1, V5R3
	• HATS Limited Edition V5.0, 5724-F97-01
	V5R3 customers not wanting to upgrade to i5/OS V5R4 but want the new V5R4 iSeries Access Family clients can order no-charge Feature No. 2648 of Product No 5722-XW1.

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iSeries Access and System i Express

- **Each i5/OS user on System i is entitled to use any client in the iSeries Access Family at no additional charge**

- **With iSeries Access, users can:**
  - **Access traditional i5/OS applications using the 5250 emulation function**
  - **Query and retrieve DB2 information through easy-to-use GUIs**
  - **Upload spreadsheet information into DB2**
  - **Use i5/OS as a file server**
  - **Access i5/OS printer output, convert it to .PDF, and print it on PC printers**

- **iSeries Access Family (5722-XW1) unlimited user feature included with 515 and 525 systems**

Just announced in April 2007

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- **What is System i Access for Web**

- **Requirements**

- **Topology**

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System i Access for Web – V5R4

A graphical interface to your System i functions

iSeries Access for Web

User: cminer System: **Myiseries.ibm.com**

Welcome to iSeries Access for Web

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

Rochester information
- City information
- Movies
- Mayo Clinic

Rochester weather
82 F
- SkyCam

Getting Started

My Information
- My Folder
- Printer output
- Display messages
- Start a 5250 session
- Database requests
- Browse files
- Preferences

My View
- See Customizing iSeries Access for Web to find out how to customize the behavior and look of iSeries Access for Web. Also, find out how to create your own home page!

Related Products
- WebSphere Application Server for iSeries
- WebSphere Development Studio Client for iSeries
- WebSphere Development Studio for iSeries

Rochester news
- Post-Bulletin online
- KTTC

Telephone directory
- Find a person
- Find a business

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

What is iSeries Access for Web
A new generation of software that enables you to access your iSeries server information and resources through a web browser!

Browser Access to iSeries Server Information
The Internet movement has taken over, and businesses are quickly moving to embrace new technologies through e-business. Since most desktop operating systems come with web browsers, users want an easy way to work with their business-critical i5/OS information and resources through the simple browser user interface that has been designed to be Internet-friendly. Users also are looking for hassle-free access through firewalls. They want access from a variety of platforms, and want no special client code that has to be installed and maintained on their desktop.

Easy Administration
i5/OS administrators are looking for ways to streamline management of user access to information in the enterprise through centrally controlled administration built around i5/OS user profiles. Additionally, administrators want to customize a user's view of the iSeries server, so those not

Done

New look in V5R4

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Functions you can perform with System i Access for Web 5722-XH2, V5R4

Print
- Printer output
- PDF Printer output
- Printers
- PDF Printers
- Internet Printers
- Internet Printer Shares
- Printer shares
- Output Queues

5250
- Active Sessions
- Start 5250 Session
- Configured Sessions
- Bypass Sign-on

Files
- Browse Files
- File Shares

Items marked in red are new in the V5R4 version

Messages
- Display Messages
- Send Messages
- Sametime
- Operator Messages
- Message Queue

Database
- Tables
- My Request
- Run SQL
  - Open Office Formats
- Copy Data to Table
- Import Requests
  - iSeries Access for Windows
  - Query Manager
  - Query/400
- Extract Server Data

Download

My Personal Folder

Jobs
- User Jobs
- Server Jobs

Customize
- Preferences
- Policies
- Settings

Commands
- Run commands
- My commands
- Search

Other
- Bookmarks
- Change Password
- Connection Pool
- Status
- Trace

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Desktop Requirements

System i Access for Web is installed and runs on System i.
It requires a browser to be running on end user desktop

- **Internet Explorer 6.0 with Service Pack 1 (Windows)**
- **Netscape 7.0 (Windows® and Linux)**
- **Netscape 4.7 (AIX®)**
- **Opera 7.54 (Windows® and Linux)**
- **Mozilla 1.7 (Windows, Linux, and AIX)**
- **Mozilla Firefox 1.0.2 (Windows and Linux)**

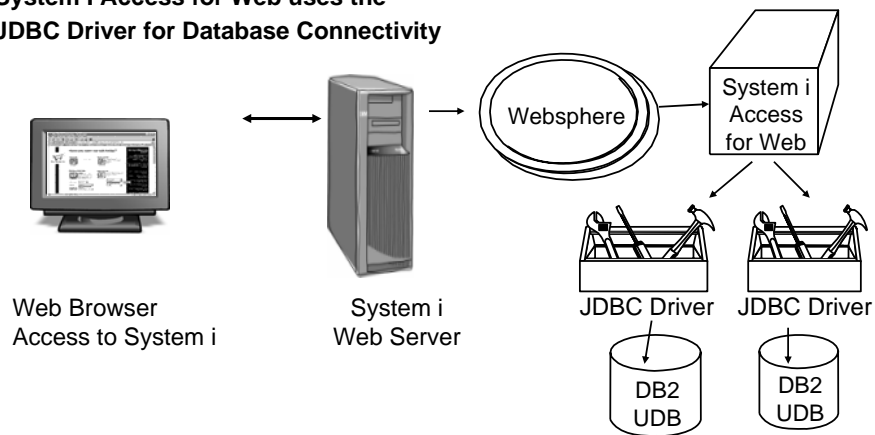*i want an i.* © 2007 IBM Corporation

5

Server Requirements

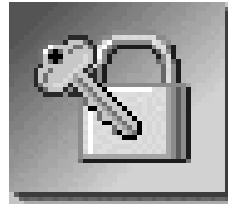**System i Access for Web requires HTTP and a web application server to be running on System i**

HTTP Server

Application Server

Servlet

Web browser

JSPs

Java Beans

Internet

Enterprise Server
Host applications
Database

Tier 1

Tier 2

Tier 3

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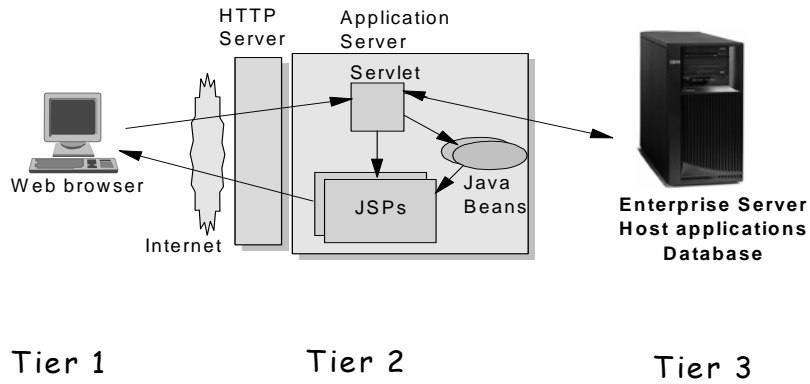
Database Overview

System i Access for Web

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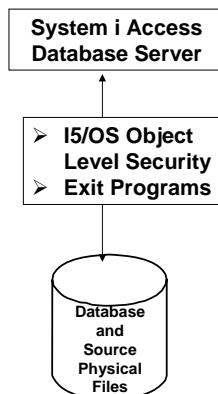JDBC Driver for Database Connectivity**

System i
Access
for Web

Websphere

Web Browser
Access to System i

System i
Web Server

JDBC Driver   JDBC Driver

DB2
UDB

DB2
UDB

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6

Security and Administration

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Security – Access to DB2 for i5/OS

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

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

– Most IBM SQL operations go through the iSeries Database DB Host Server and use the QIBM_QZDA server exit point.
– This includes Data Transfer, ODBC, .NET, parts of OLE DB, and some functions of the Toolbox (JDBC including Access for Web).
– *See: http://publib.boulder.ibm.com/iseries/v5r2/ic2924/index.htm?info/sqlp/rbafymst324.htm*

System i Access Database Server

➢ **I5/OS Object Level Security**
➢ **Exit Programs**

Database and Source Physical Files

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 the iSeries
– Given the SQL statement sent from the client application (Data Transfer). Statements may be rejected by the user exit program
– May be written in a variety of host languages

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7

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

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The Database function

System i Access for Web – Database Functions

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

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

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

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

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

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

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

Extract server data
- Extract server object information into a database table.

My Requests

What you might allow your typica[l]
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

These are called Shortcuts

iSeries Access for Web

My Requests

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

My Home Page
Print
5250
Database
· My requests
Files
Download

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

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Static Requests

**Run a pre-built query or
upload**

– **Example is a Query that
is set up to display up to
500 entries**

This query could be set up to:

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

iSeries Access for Web

SQL Output

BCOST	BYEAR	BTYPE	BNAME	BFEET	BNT01
2975000	1996	P	Monterey Marine Custom	80	-Located in Stuart, FL
1588000	2005	P	Fairline Squadron	58	Motor yacht with flybridge, 3 staterooms, diesel
1000000	1979	C	Poole Boat Co Aluminum	80	-Located in S. Diego, CA
750000	1995	P	Spandau Houseboat	720	8 cabins, 12 berths, 4 toilets, Volvo MD 2040 engine
450000	1990	S	Merlin's Magic	54	-Designed by Dutch naval architect Ernst Van Derlaan.
450000	2000	A	Seacamper 795 Houseboat	72	2 cabins, 4 berths, 1 toilet, wheel-rudder steering, diesel fuel
269500	1989	S	Seafinn 411 Motorsailer Ketch	41	-Silver anodised spars by Selden of Sweden. Main and
249000	1944	T	Miki Miki Original Tug	126	-Located in Seattle, WA.
185000	2000	P	Baveria 50 Yacht	50	5 cabins, 3 showers, Volvo TMD22 78P5 engine
179500	1993	S	Fountaine Pajot Antigua	37	-Fiberglass hull and deck with a vacuum bagged core.
179000	1989	S	Nauticat 40	40	-All hand laminated fiberglass construct layers of mat
159900	1981	S	Shannon 50 ketch	50	-Walter Shulz design ketch built by Shannon Boat Co. Inc.
149000	1985	S	Brandmayr 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.
68000	1984	S	Corsair 27	27	-Equipped for cruising and racing

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

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· iSeries Navigator
· iSeries Information Center
· iSeries Resource Library

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Dynamic Query

Example has 2 conditions the end user can set:

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

Query brings back only database entries meeting conditions

iSeries Access for Web

Find Boat

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

Select Boat Type

P ⌄
A
C
P
S
T

in US$ greater than or equal to: 20000

in US$ less than or equal to: 500000

OK   Cancel

iSeries Access for Web

SQL Output

My Home Page
☐ My Folder
Print
Messages
Jobs
5250
Database
· Tables
· My requests

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

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**How to work with the database features**

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When using 'Database' functions

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

– **Simply add other database connections to your list**

  • **Easiest way to do this is to copy the default one, then modify it and save it.**
  • **It will then appear as an option in the Connection pulldown**

– **The default IBM Toolbox for Java is for DB2 for i5/OS, but you could use other driver managers to connect to other systems**
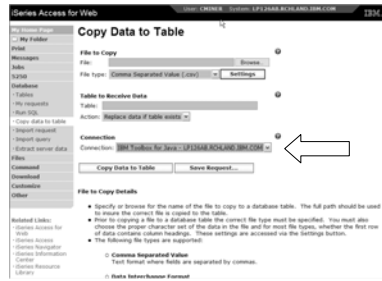
Database – use WAS data sources (new in V5R4)
Servlet version

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

Two types of connection definitions are supported:

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

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

Upload PC data to DB2 for i5/OS
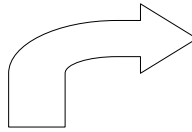
Copying Data to DB2 for i5/OS

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**

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

---

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

14

Query DB2 for i5/OS

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Run SQL

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

- **If you do not know SQL, then use the SQL Wizard to help you generate an SQL SELECT statement**

- **Select from a variety of output formats, including:**
  - **Preview**
  - **PDF**
  - **.XLS (Excel)**
  - **XML**
  - **HTML**
  - **…**

Run SQL

SQL Statement
```
SELECT
   *
FROM
   BOATS.BOATS
```
SQL Wizard

SQL Output
Type: Preview
Destination: Browser
Settings
Settings

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

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

Run SQL   Save Request...

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

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The SQL Wizard

The SQL Wizard helps you generate a single table SELECT statement

---

Identify the DB2 for i5/OS database table

Step 1:

Choose a table

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

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

16

Select your Output Columns

Step 2:

Choose columns

- **Check the boxes next to the columns to include them in the statement**
    - If you check none, you get all columns

- **Click the column order button to change the order output**
    - Changed Price from 50 to 05 so it would be first

Specify Conditions

Step 3:

Adding conditions

- **Conditions allow you to select records that meet certain criteria.**

- **Click Add New Condition to specify a condition.**

- **Select the column to use in the condition and click Next**

17

Choose the operator type

- **The SQL wizard allows you to choose the operator to use in the condition**

- **The condition shows up both in the SQL and in a condition list. You may edit or delete the condition.**

- **You may also add additional conditions.**

iSeries Access for Web
User: CMINER Sys

Condition Operator

Column: BCOST   NUMERIC(9)   Price in US$

Column > [Operator]

Select an operator.

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

[Back] [Next] [Apply] [Cancel]

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

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**

iSeries Access for Web
User: CMINER System: LP12UAB.RCHLAND.IBM.COM

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]

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

New in V5R3

Specifying a Static Value

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

The value can be:
- **A value,**
- **Constant or**
- **Other specific function**

Can find values in table

The statement is complete!

- **The statement is now complete.**

- **Click the Finish button (not shown) on the bottom of the SQL Wizard page to return to Run SQL**

- **The SELECT statement you generated is available for use in Run SQL**

19
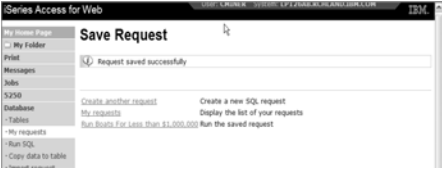
Save the SQL Request

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

Can Run it now

Or

Run it later from "My Requests"
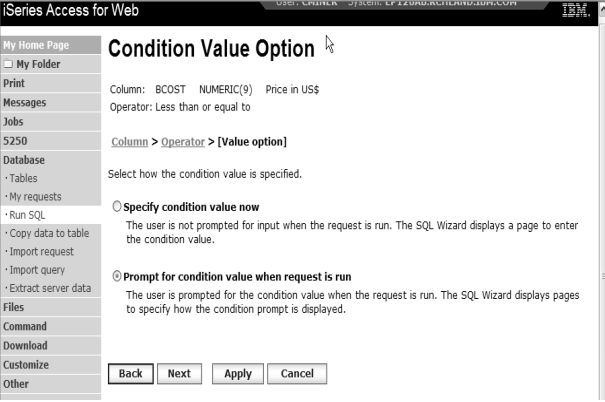
Dynamic Query – condition value

Select to prompt for values when the request is run

20

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**

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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**

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21

Can Include Multiple Conditions on Dynamic SQL Requests

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

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Setting up Additional Operator and Prompt Type

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

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

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Set Display Order and See Conditions Set

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

- **Shows how SQL has been written based on 2 Conditions**

User Runs Dynamic Query built with 2 Conditions

User selects

- **Maximum cost of boat**
- **Type of Boat**

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

Dynamic query – wizard warning

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

- **If you wish to create your own you will need to manually add parameter markers directly into the SQL statements**

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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

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24

SQL Output Destinations

SQL Output Destinations

Choosing a destination

Choose from 4 different output destinations:

- **Browser**
- **Email**
- **Personal folder**
- **V5R4 Integrated File System**

Run SQL – Output Browser

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

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

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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

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26

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 the SQL Output**
➢ **Shown to me in HTML**

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Run SQL – Integrated File System

The SQL statement is built indicating that:

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

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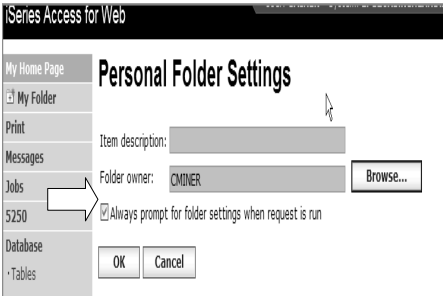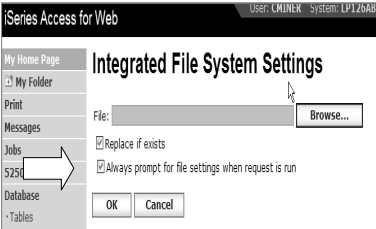
i want an i.

Destination Settings

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

Or you can wait until the request is run

iSeries Access for Web

Mail as Attachment Settings

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

From: cminer@us.ibm.com
To:
CC:
bcc:
Subject:

Attachment: sqlOutput.pdf

☑ Always prompt for mail settings when request is run

OK   Cancel

Related Links:

iSeries Access for Web

Personal Folder Settings

My Home Page
My Folder
Print
Messages
Jobs
5250
Database
· Tables

Item description:
Folder owner: CMINER   Browse...

☑ Always prompt for folder settings when request is run

OK   Cancel

iSeries Access for Web   User: CMINER System: LP126AB

Integrated File System Settings

My Home Page
My Folder
Print
Messages
Jobs
5250
Database
· Tables

File: Browse...
☑ Replace if exists
☑ Always prompt for file settings when request is run

OK   Cancel

i want an i.

Shortcuts

Give users access to upload/download requests you have created

i want an i.

Shortcuts – working with, managing

Under "Action" column, you can:

- **Create shortcuts**
- **Edit your shortcuts**

At bottom of screen, you can:

- **Delete shortcuts to existing users or groups**

i want an i. © 2007 IBM Corporation
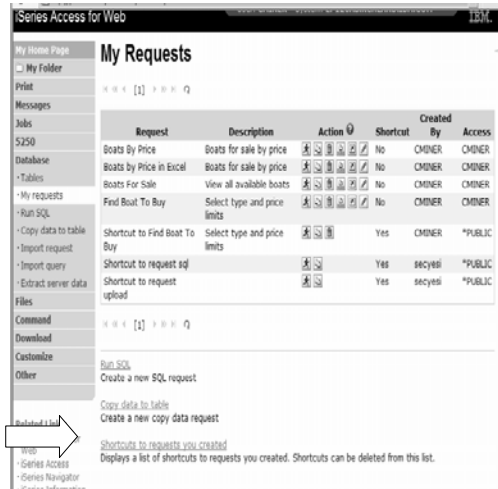
Shortcuts – giving users access

Under "Actions" select Create Shortcuts.

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

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

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

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29

Set Policies for Building Requests / Using Shortcuts

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

Decide what users can do with your shortcuts

- **Copy them**
- **Delete them**

Set up Policies to:

- **Allow users to create and modify requests**

or

- **Run only previously defined shortcuts**

User can only run shortcuts previous built by someone else

30

Import Requests and Import Queries

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Importing Client Access Data Transfer Requests

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

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31

Import Function

- **Don't lose your investment in already built Data Transfer requests**

- **Import them into iSeries Access for Web**

- **The imported transfer request may be run or saved as an iSeries Access for Web request**

- **Then users can run them from their browsers!**

Import Query Requests

- **Bring your existing queries to a browser environment**

- **Use the Import Query tool to bring them into iSeries Access for Web**

  – **IBM Query for iSeries (5722-QU1)**

  – **DB2 Query Manager (5722-XT1)**

*QMQRY and *QRYDFN **New in V5R4**
are the query file types supported

Extract Server 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 server data
- Files
- Command
- Download
- Customize

Extract Server Data

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

- **Then use Tables or Run SQL functions to retrieve relevant data.**

Extract Server Object Data

Object Data to Extract
Objects: User profiles

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

Extract Results
Output: Browser

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

Extract Data

33

Extract Server Data

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

- **General object information can be retrieved for any iSeries object type.**
- **Object specific information can also be retrieved for the following object types:**
    - Directory entries
    - Messages
    - Software fixes
    - Software products
    - System pool
    - User profiles

- **You could easily build a query:**
    - **To find out what users have used more than 100 MB of storage in the IFS**
    - **Or you might want to know what users have had more than 2 invalid sign-on attempts in the past three months.**

- **This very powerful capability lets you look at your iSeries information in any manner that is of importance to you.**

GUI to work directly with DB2 for i5/OS Table data
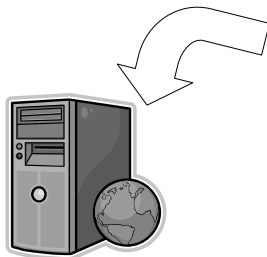
Tables – work with iSeries database information

Action

iSeries Access for Web

Tables

☐ My Folder

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

[1] 2 3 4 5 6 7 8 9

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

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

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

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Working with Tables

iSeries Access for Web

Tables

Connection & Table Filter

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

Table Actions

[1] 2 3 4 5 6 7 8 9

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

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

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

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35

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.

iSeries Access for Web

Edit Policies - Database

Profile: CMINER

Policy	Derived From	Action	Setting
Database access	Shipped default	Use current setting	Allow
Database tab	Shipped default	Use current setting	Allow
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

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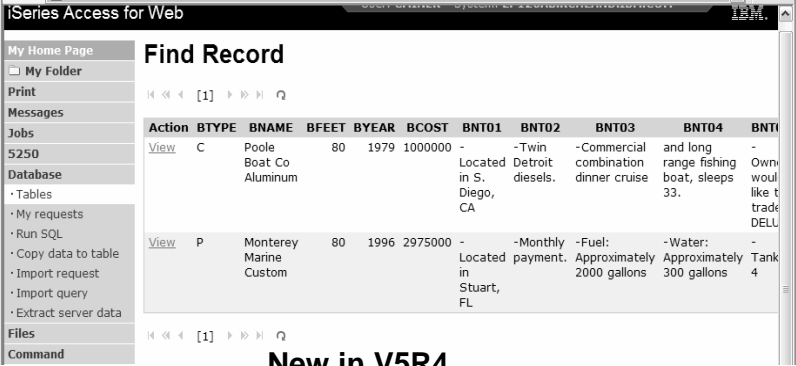
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Tables → Find Record

- **If you don't want users 'updating', 'inserting' or 'deleting' records,**

- **then let them use only the Find function**

iSeries Access for Web

Find Record

Action	BTYPE	BNAME	BFEET	BYEAR	BCOST	BNT01	BNT02	BNT03	BNT04	BNT0
View	C	Poole Boat Co Aluminum	80	1979	1000000	-Located in S. Diego, CA	-Twin Detroit diesels.	-Commercial combination dinner cruise	and long range fishing boat, sleeps 33.	Own woul like t trade DELU
View	P	Monterey Marine Custom	80	1996	2975000	-Located in Stuart, FL	-Monthly payment.	-Fuel: Approximately 2000 gallons	-Water: Approximately 300 gallons	-Tank 4

New in V5R4

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Tables → Update Function

1

iSeries Access for Web

Select Records to Update

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

Column	Type	Value	Description
BTYPE	CHAR(1)		P=Powered S=Sailing
BNAME	CHAR(30)		boat name
BFEET	NUMERIC(3,0)	80	Length in feet
BYEAR	NUMERIC(4,0)		Year built
BCOST	NUMERIC(9,0)		Price in US$
BNT01	CHAR(72)		Note 1
BNT02	CHAR(72)		Note 2

**Wildcards
may be used
in the
selection**

2

iSeries Access for Web

Records to Update

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

3

iSeries Access for Web

Update Record

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

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

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Inserting New Records into A Table

**Column
Name**

**Column
Type
& Length**

**Enter
values for
each
column**

iSeries Access for Web   User: CM1NER   System: LP1Z0AB.RCHLAND.IBM.COM

Insert Record

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

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

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37

Appendix A. HTML Output Types

i want an i.

Use HTML File support
Updating a Web server

Download Database information to Workstation

1 → HTML File Generated at PC

2

Send HTML output to Web Server File System

3

Client browsers view HTML on iSeries or PC Web Server

Client PC
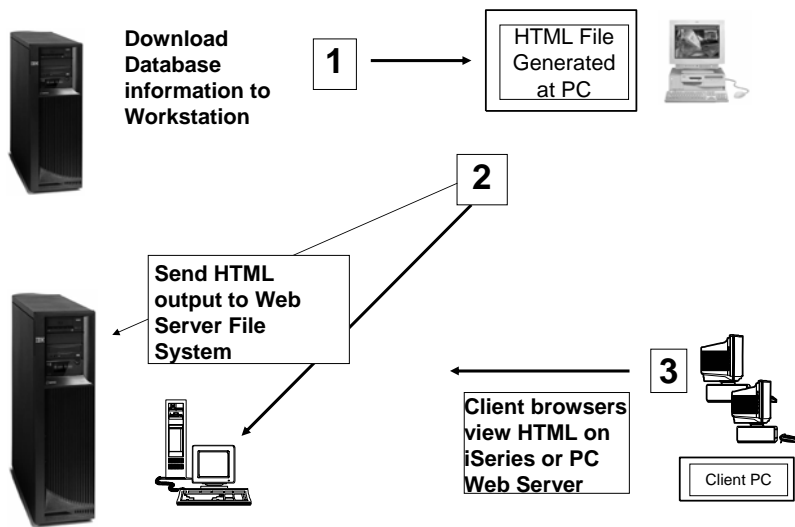
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HTML Output Settings

• **Many settings from:**

• **Caption**

• **Table**

• **Cell data**

Displaying output in a paged list

iSeries Access for Web (continued)

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

39

Contrasting other layouts

File   Edit   View   Favorites   Tools   Help

Customer Information

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

Done

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

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

File   Edit   View   Favorites   Tools   Help

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

SQL Output

[1] 2 3 4

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

[1] 2 3 4

Done

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

---

HTML Output Settings [- Microsoft Internet Explorer

File   Edit   View   Favorites   Tools   Help

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

Template

File: /boats/homepage/accesswater.html

Tag: %%CONTENT%%

General

Character set: Multilingual [UTF-8]

Maximum rows:

File   Edit   View   Favorites   Tools   Help

IBM   *Access for Water*   Supplying quality boats since 2002

Home

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

IBM | iSeries | Service

Done   Internet

iSeries Access for Web **(continued)**

40

Example of template file

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

Appendix B: Comparisons: Similarities / Differences

- **iSeries Access for Windows**

- **iSeries Access for Web**

Supported File Formats

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

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Supported File Formats (continued)

Supported file formats	iSeries Access for Web Database (servlets)	iSeries Access for Windows Data Transfer
• Preview (on downloads)	Yes	Yes
• Portable Document Format (PDF) (on downloads)	Yes	No (can send to PC printer by selecting 'Print' as output device)
• Microsoft Excel Version 3	Yes	Yes
• Microsoft Excel Version 4	Yes	Yes
• Microsoft Excel Version 5	No	Yes
• Microsoft Excel Version 7	No	Yes
• Microsoft Excel Version 8	No	Yes
• Microsoft Excel XML	Yes	Yes
• Lotus 123	No	Yes
• Lotus 123 Version 1	Yes	No
• Lotus 123 Version 4	No	Yes
• Lotus 123 Version 9	No	Yes

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Comparison of Database Capabilities

Feature / Function	iSeries Access for Windows	iSeries Access for Web	iSeries Access for Linux
ODBC driver	Yes	No	Yes
OLE DB provider	Yes	No	No
.NET provider	Yes	No	No
From an iSeries, start programs/commands on PC – **Incoming Remote Command**	Yes	No	No
GUI to find, add, update, delete selected records in an iSeries database Table	No	Yes	No
GUI to convert query results to .PDF format	No	Yes	No
GUI to e-mail query results in one step	No	Yes	No
Wizard to import Query/400 SQL requests	No	Yes	No
Wizard to import Query Manager SQL requests	No	Yes	No
Wizard to import iSeries Access for Windows Data Transfer requests	No	Yes	No

Programming Support
  – **ActiveX automation Objects**
  – **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	iSeries Access for Windows	iSeries Access for Web
• All SQL Statements Supported	Yes	Yes
• Wizards to build SELECT statements and convert to PC format	Yes	Yes
• Can build SELECT statements with group, having, and join support	Yes	No
• Can create dynamic queries (prompted for input at time of running)	No	Yes
• Access to members other than the default member	Yes	No
• Wizards to upload PC data to iSeries DB2	Yes	Yes
• Support for Source Physical Files	Yes (sequence and data generated on uploads is not returned by default)	No (treated the same as other Table Values)
• Upload data directly from Excel	Yes	No
• Excel dates/times handled as dates/times	Yes	No, handled as character strings
• Can run predefined saved requests	Yes	Yes
• Schedule requests to run silently	Yes	No
• Can Share requests amongst users	No, put on shared drive	Yes, via Shortcuts
• Can run multiple requests simultaneously (batch)	Yes (RTOPCB, RFROMPCB)	No
• Asynchronous Processing (ie, control returned before request completes)	No	Yes (except for Browser option)

Request Types

iSeries Access for Web	iSeries Access for Windows
Database Requests From iSeries 1. Requests are saved by User name, extension types are not displayed 2. An "Import" Facility (*) can be used to convert iSeries Access for Windows Data Transfer requests to iSeries Access for Web requests	**Data Transfer From iSeries** 1. .DTF - New request type used by iSeries Access for Windows 2. .TTO - Request type used in 5763-XD1 and DOS Extended clients 3. .DT - Request type used in Windows 3.1 client 4. .RTO - Rumba transfer request file
Database Requests To iSeries 1. Requests are saved by User name, extension types are not displayed 2. An "Import" Facility (*) can be used to convert iSeries Access for Windows Data Transfer requests to iSeries Access for Web requests	**Data Transfer To iSeries** 1. .DTT - New request type used in iSeries Access for Windows 2. .TFR - Request type used in 5763-XD1 and DOS Extended clients 3. .DT - Request type used in Windows 3.1 client 4. .RTO - Rumba transfer request file

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

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Microsoft Excel Support

What is significance of various Microsoft Excel formats supported?

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

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

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Overall Strengths – database function

iSeries Access for Windows

Data Transfer

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

iSeries Access for Web

Database:

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

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