iSeries Access Family – What's New & Hot in V5R4

ibm.com
the power of one

**IBM System i5
ITSO Technical Forum 2006**

Carole A Miner
cminer@us.ibm.com
Rochester, Mn

Redbooks
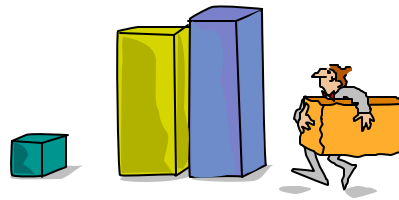International Technical Support Organization

Simplify your IT

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iSeries Access Family Products

Linux (native) → **iSeries Access for Linux**

Windows (native) → **iSeries Access for Windows**

Wireless → **iSeries Access for Wireless**

Browser-based → **iSeries Access for Web**

→ **HATS LE**

Packaging & Ordering

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iSeries Access Family Packaging

V5R4 5722-XW1 iSeries Access Family	V5R3 5722-XW1 iSeries Access Famil	V5R2 5722-XW1 iSeries Access Family
• iSeries Access for Windows, 5722-XE1, V5R4	• iSeries Access for Windows, 5722-XE1, V5R3	• iSeries Access for Windows, 5722-XE1, V5R2
• iSeries Access for Web, 5722-XH2, V5R4	• iSeries Access for Web, 5722-XH2, V5R3	• iSeries Access for Web, 5722-XH2, V5R2
		• WebSphere Host Publisher, 5724-B81, V4.0, 5724-B81, V4.01
	• HATS Limited Edition V5.0, 5724-F97-01	• HATS Limited Edition V4.0 5724-D34-01
• iSeries Access for Linux, 5722-XL1	• iSeries Access for Linux, 5722-XL1, V1.10	• iSeries Access for Linux, 5722-XL1, V1.0
• iSeries Access for Wireless, 5722-XP1, V5R4	• iSeries Access for Wireless, 5722-XP1, V5R3	• iSeries Access for Wireless, 5722-XP1, V5R2
	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	V5R2 customers not wanting to upgrade to i5/OS V5R3 but want the new V5R3 iSeries Access Family clients can order no-charge Feature No. 2647 of Product No. 5722-XW1

Products - Focus

Description	Product	Product Number	Need 5722-XW1 to use
Family Name	➢iSeries Access Family	5722-XW1	Yes
Windows client	➢iSeries Access for Windows	5722-XE1	Yes (for 5250 and Data Transfer)
Linux client	➢iSeries Access for Linux	5722-XL1	Yes
Browser Access	➢iSeries Access for Web	5722-XH2	Yes
Handheld / Wireless offering	➢iSeries Access for Wireless ➢iSeries Toolbox for Java ME	5722-XP1	No
OS/400 systems management	➢iSeries Navigator ➢Operations Console ➢EZ-Setup	Packaged in 5722-XE1	No

Flexible Purchase Options
Processor-Based = purchase price based on software tier, connect unlimited numbers of users
User-Based = purchase only number of users who will be concurrently connected
       Note: Can upgrade from User-Based to Processor-Based, but cannot go back
           to User-Based after purchasing Processor-Based
Software maintenance included in base OS/400 software subscription

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Core LOB Solutions

Internet

Extranets

iSeries Core LOB Solutions

Intranet
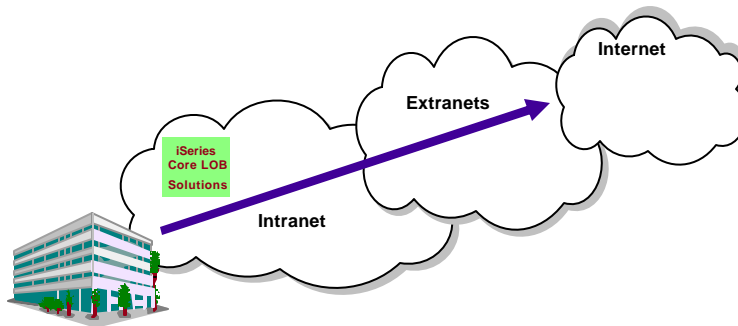
Looking for highly functional and integrated solution for:

• **Windows servers and Windows desktop users**

• **iSeries administration and operation**

iSeries Access for Windows

iSeries Access for Windows

**iSeries Access for
Windows
5722-XE1
V5R4**

iSeries Access for Windows

innovative...
integrated...
impressive...
...iSeries

iSeries Access for Windows... the strategic
choice for interacting with and managing
your iSeries servers.

www.ibm.com/eserver/iseries/access

www.ibm.com/eserver/iseries/access/windows

Integrating native Windows with iSeries
Want a single solution for working with all iSeries resources...

- **A single offering designed for Windows users that provides:**
  - **High-function, easy-to-use 5250 emulator to work with iSeries applications**
  - **A PC print server that OS/400 output can be sent to and run unattended**
  - **Access to iSeries database and other resources from Windows applications**
  - **Ability to use iSeries as file and print server**
  - **Administer users and monitor/manage iSeries servers in the network**
- **No special web application server code required**
  - **All code runs natively on the Windows**
- **It's all in iSeries Access for Windows**
  - **PC5250 emulation, Data Transfer, ODBC, etc for end users and Windows programmers**
  - **iSeries Navigator for iSeries operators and administrators**
  - **Operations Console to work with OS/400 system console**
  - **EZ-Setup to quickly and easily set up new iSeries servers**
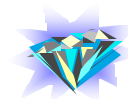
- **The most comprehensive iSeries native Windows connectivity solution in the market**

- **90+% of iSeries customers already using iSeries Access for Windows**

4

Supports Microsoft operating environments...

**Microsoft Transaction Services (MTS)**

- **example, an Auction House application where may need to back out transactions (ie, 2-phase commit)**

Terminal Server Edition (TSE)

- **iSeries Access runs on a Windows server, and enables multiple simultaneous users (such as Network Stations, DOS, Unix, or Macintosh) work with iSeries resources**

Internet Information Services (IIS)

- **Provides a Web application infrastructure for Windows Servers. iSeries Access runs on server, and fulfills requests for iSeries data (ie, ODBC, OLE DB, etc)**

UNIX...
Windows
Network Stations
Macintosh
IFS
Windows under iSeries (iXS, iXA)
web server
TSE
IIS
Windows server
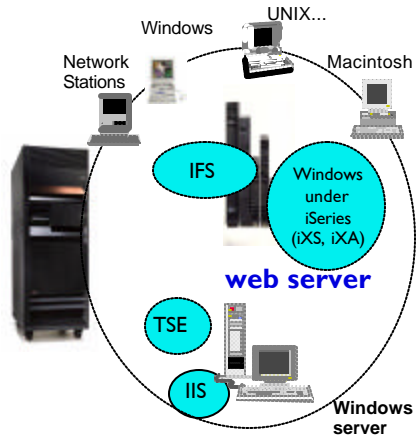
Supports leading network and security offerings...

Security

- **Secure Sockets Layer (SSL)**
  - Including SSL client authentication

- **Kerberos**
  - Enterprise Identify Mapping (EIM) can be used with Kerberos

- **Long passwords**

Networking

- **Virtual Private Networks (VPN)**
  - Tunneling protocol and encryption to ensure secure communications

- **NAT (Network Address Translation)**
  - Hides iSeries address when on Internet

Firewalls

Firewalls
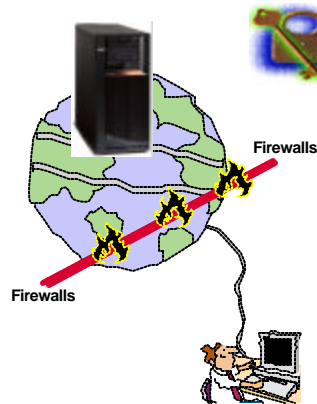
If you do it on iSeries, you can do it with iSeries Access for Windows...

Windows Operating Systems

The V5R4 version of iSeries Access for Windows can be installed on:

- Windows 2000
- Windows XP Professional
- **Windows XP Tablet PCs**
- Windows 2003 Server

64-bit Processors supported*

- **Advanced Micro Devices (AMD64)**
- **Intel with EM64T**
- Intel with Itanium

V5R3 iSeries Access for Windows installs on:
- Windows **NT 4.0,** 2000, XP, 2003

V5R2 iSeries Access for Windows installs on:
- Windows **98, ME**, NT 4.0, 2000, XP, 2003

V5R1 iSeries Access for Windows installs on:
- Windows **95**, 98, and ME, NT 4.0, 2000, XP

Refer to www.ibm.com/eserver/iseries/access/supportedos.htm for detailed information on what functions support 64-bit

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PC5250 updated (Personal Communications 5.8)

Key enhancements include:

- **Support to associate printer sessions with display sessions**
- **A new configurable, printer session window that provides host, printer, and page setup support.**
- **New programming interfaces (APIs) to retrieve and modify Page Setup and Printer Setup information**
- **Additional bi-directional enablement**
- **New automation objects support for the .NET environment**

The 5250 emulator (PC5250), integrated with iSeries Access for Windows, is the Version 5.8 of IBM Personal Communications
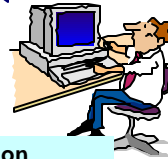
iSeries ODBC Driver

ODBC

Most popular database access method from a Windows application

Runs on 32-bit and 64-bit Windows O/S

Compliant with Microsoft ODBC Version 3 specification

- PC applications can now take advantage of new functions included in the 3.5 Specification.

I

ODBC Enhancements – V5R4, V5R3, V5R2

V5R4 Enhancements	V5R3 Enhancements	V5R2 Enhancements
Requires i5/OS V5R4 ? 128-byte column names ? Maximum SQL statement lengths of 2,097,152 bytes or 1,048,576 characters ? Support for IBM Enterprise Workload Manager (eWLM) correlator ? Support for lock sharing between loosely coupled transactions OS/400 V5R2 or later ? Improved support for delimited names	? Support for BINARY / VARBINARY data types ? Support for UTF-8 / UTF-16 data ? Support for increased precision of decimal numbers ? Enhanced MTS support ? ANSI / ISO (American National Standards Institute / International Standards Organization) Core Level SQL standard of 1999	? 64K SQL Statements ? Additional descriptor information ? MTS Support (actually shipped in V5R1)

I

iSeries OLE DB Provider

OLE DB

Microsoft-recommended Access for 32-bit Windows applications
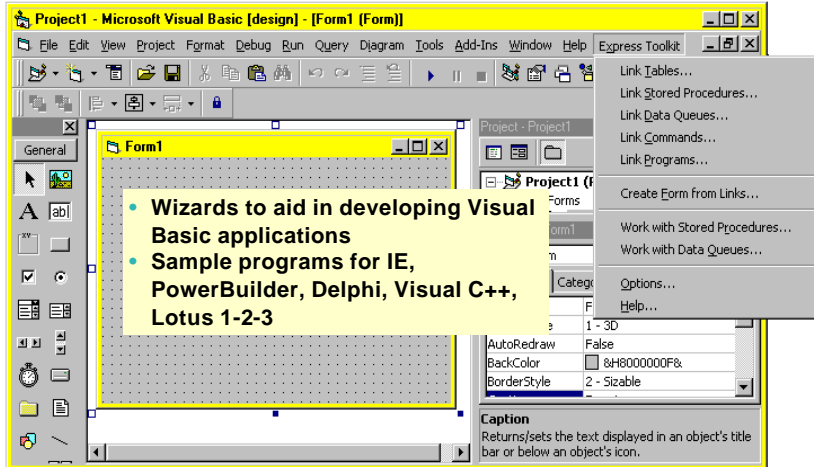
- Record level access
- Data Queues
- Stored Procedures
- SQL
- Remote Commands
- ODBC

👉 **plus add-ins for Visual Basic**

OLE DB Provider supports OLE DB 2.5

Visual Basic Programming Aides

Project1 - Microsoft Visual Basic [design] - [Form1 (Form)]

File Edit View Project Format Debug Run Query Diagram Tools Add-Ins Window Help Express Toolkit

Form1

- **Wizards to aid in developing Visual Basic applications**
- **Sample programs for IE, PowerBuilder, Delphi, Visual C++, Lotus 1-2-3**

Link Tables...
Link Stored Procedures...
Link Data Queues...
Link Commands...
Link Programs...

Create Form from Links...

Work with Stored Procedures...
Work with Data Queues...

Options...
Help...

Project1 (

Project - Project1

AutoRedraw   False
BackColor   &H8000000F&
BorderStyle   2 - Sizable

Caption
Returns/sets the text displayed in an object's title bar or below an object's icon.

plus add-ins for Visual Basic

OLE DB Enhancements – V5R4, V5R3, V5R2

V5R4 Enhancements	V5R3 Enhancements	V5R2 Enhancements
Requires i5/OS V5R4 ? **128 byte column names** ? **Maximum SQL statement lengths of 2,097,152 bytes or 1,048,576 characters** ? **Support for IBM Enterprise Workload Manager (eWLM) correlator** **OS/400 V5R2 or later** ? **System naming and library list** ? **Improved support for delimited names**	? **New SQL -only provider (IBMDASQL)** • **SQL commitment control using IBMDASQL** • **MTS support using IBMDASQL** ? **SQL** • **Custom blocking in SQL** • **SQL data compression** • **SQL package support** ? **New Record-Level Access-only provider (IBMDARLA)** • **Record-level access support for forward-only cursors and blocked reads using IBMDARLA** ? **Supports updatable cursors for the SQL dialect** ? **Database BINARY and VARBINARY data types** ? **Database larger decimal precision support** ? **Unicode support** • **UTF-8 & UTF-16 support**	? **Custom properties added** • **Force Translate (translate CCSID 65535 data)** • **Default Collection** • **Catalog Library List** • **Convert Date Time To Char** ? **Supports updatable cursors for the SQL dialect** ? **Supports ROW -ID** ? **64K SQL Statements** ? **Additional descriptor information** ? **Is thread safe** ? **OLE DB provider work with Windows products, such as:** • **Visual Basic 6.0 OLE DB controls and wizards** • **ADO 2.5 – ships with Microsoft Windows 2000** • **ADO 2.1 - ships with Microsoft IE 5.0 and Office/2000 products** • **An OLE DB interface is provided to support ADO recordset Seek (ADO 2.x)**

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iSeries .NET Provider

Runs on 32-bit and 64-bit Windows O/S

.NET

The next big wave in Microsoft technology

Microsoft's Technology Roadmap

Today

- DB-Library
- ESQL
- DAO
- ODBC
- ADO/OLEDB
- ADO.NET

The .NET provider is named IBM.Data.DB2.iSeries.
• It allows applications using Microsoft's .NET framework to access DB2 UDB for iSeries databases.

For complete documentation of the .NET Data Provider, see IBM DB2 UDB for iSeries .NET Provider Technical Reference.

.NET Enhancements – V5R4, V5R3

V5R4 Enhancements	V5R3 Enhancements
Requires i5/OS V5R4 ? **128 byte column names** ? **Maximum SQL statement lengths of 2,097,152 bytes or 1,048,576 characters** ? **Support for IBM Enterprise Workload Manager (eWLM) correlator** **Requires OS/400 V5R2 or later** ? **System naming and library list** ? **Support for LOB data types** ? **Support for multiple active result sets per connection** ? **Customizable String processing for Char for Bit Data, Date, Time, Timestamp, Decimal, and Numeric data types** ? **Support for IntelliSense** ? **Additional sample programs** ? **Improved support for delimited names**	**Requires OS/400 V5R2 or later** ? **SQL (INSERT,UPDATE, DELETE)** ? **Commitment Control** ? **Connection Pooling** ? **SQL naming** ? **Unicode** ? **Tracing** ? **Threads** ? **IASPs (multiple databases)** ? **Stored Procedure Support** ? **iSeries-specific Properties** ? **User-Defined Types** **Supported later via SP SI15176** ? **System Naming (/)** ? **Library List** ? **Large Objects (LOBs)**

Redbook - SG24-6440

8,000+ downloads in first 6 months!

Integrating DB2 Universal Database for iSeries with Microsoft ADO .NET

Customers have been using the IBM DB2 UDB for iSeries for many years with data access technologies such as ODBC and OLE DB. The newest data access technology from Microsoft is called ADO.NET. Applications that use ADO.NET with the iSeries can work with several different .NET providers:

– The IBM.Data.DB2.iSeries provider, a .NET-managed provider new to iSeries Access for Windows in V5R3
– The IBM.Data.DB2 provider, a .NET provider that works with all IBM eServer platforms in conjunction with DB2 Connect
– The Microsoft System.Data.OleDb provider, as a bridge to one of the OLE DB providers included with iSeries Access for Windows (IBMDA400, IBMDASQL, and IBMDARLA)
– The Microsoft System.Data.Odbc provider, as a bridge to the ODBC driver included with iSeries Access for Windows
This IBM Redbook shows customers how to use ADO.NET effectively to harness the power of DB2 UDB for iSeries, showing examples, best practices, pitfalls, and comparisons between the different ADO.NET data providers.

Incoming Remote Command (IRC)

- **RUNRMTCMD is used to run a PC command from the OS/400 command line in a 5250 session**

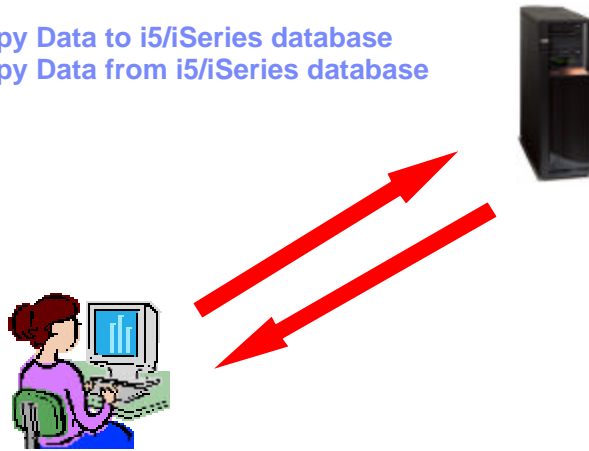- **Since it is a CL command, RUNRMTCMD may also be run from a CL program running on a server**

1

2

- **CWBRXD is the name of the program that provides and controls the Incoming Remote Command (IRC) function**
  - **RXD in the name stands for Remote eXecution Daemon**
  - **The terms CWBRXD and IRC are used interchangeably**

V5R4	V5R3
The remote program interfaces (CWBRC.H) that run on the PC have been changed to allow a more complete list of job messages to be returned.	A new option: /loadprof Allows commands to have access to the user-specific registry and environment variable settings while they are running • Some commands require setting this option in order to work properly • This option can be saved on the Incoming Remote Command tab of iSeries Access for Windows Properties, where it is called Load user profile when command run in user contex For further information regarding this new option, refer to the CWBRXD and Incoming Remote Command topic in the User's Guide (use this path: Start > Programs > IBM iSeries Access for Windows > User's Guide

- The Incoming Remote Command function runs a command on the Windows PC and then routes any text output that is generated by the command back to the requesting system.
- Commands are sent to the Windows PC in the format of commands that are typed on a Windows command prompt
- The output that would normally appear in that command prompt is sent back to the requesting system
- If the command produces no output, a no output message is sent instead.
- When a command is sent from a remote system, a message is logged in the iSeries Access for Windows history log. The message information that is logged identifies the system and user ID that sent the remote command, the text of the command that was sent, and whether or not the command could run. If no user ID is specified with the command, no user ID is logged.

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Data Transfer

- **Copy Data to i5/iSeries database**
- **Copy Data from i5/iSeries database**

Data Transfer Enhancements – V5R4, V5R3, V5R2

V5R4 Enhancements	V5R3 Enhancements	V5R2 Enhancements
? **Support MS Excel XML Spreadsheet format** ? **Support 128-byte column names** ? **Support PC selection of an independent auxiliary storage pool (IASP)** ? **Support creating and overwriting empty query result sets** ? **Improved support for delimited names (requires V5R4 SP1)**	? **Unicode enablement / New Unicode text file type** 　• **Support UTF-8 and UTF-16 data in DB2 database tables** ? **Support larger decimal precision** ? **Support BINARY and VARBINARY SQL data types** ? **Support most recently used request list and last directory in Excel Add-in** ? **Date/Time fields recognized by Data Transfer and now stored on DB2 for iSeries as 'date or time' field.** ? **Option to convert numeric to character when transferring to iSeries DB** ? **Support data compression for faster transfers**	? **Support for uploading more than 256 columns of data to a database file** ? **Add-ins for Excel to upload data directly from spreadsheet** ? **Support Excel V7 (BIFF7) and V8 (BIFF8) file formats. (Excel 97 and 2000 use V8 file formats)** ? **Support Lotus 123 V9 file format (with 65,536 rows)** ? **Support numeric cells within formula (Excel, Lotus 123)** ? **Support new iSeries database functions**

iSeries Access for Windows Installer – Technology Preview

Available for customers who prefer to use the Microsoft Windows Installer technology.

- **English National Language Version 2924 only**

- **Can be used on Microsoft Windows XP, Windows 2000, and 32-bit version of Windows Server 2003.**

Download it from www.ibm.com/eserver/iseries/access/windows.

- **Detailed information on the features included in this Technical Preview.**

Customer comment

iSeries Access for Windows V5R3 beta

- **I was able to quickly create a VB.NET data access program to read data from an iSeries table. The performance seemed great.**

- **I was also impressed with the improved performance of many of the Ops Nav system functions. For example, it used to take minutes to display the tables in a relatively small library, now it takes only seconds.**

- **I am using VPN to access our iSeries over the Internet using a cable modem.**

    Paul D. Olsen, Senior Systems Architect
    Silvon Software, Inc., Annapolis MD
    The Enterprise Performance Management Company
    www.silvon.com

Silvon

iSeries Access for Linux

www.ibm.com/eserver/iseries/access/linux

- **First available in Aug 2003**

- **Latest release available Aug 2005**

7000+ downloads to-date

What is iSeries Access for Linux

iSeries Access for Linux includes the following features:

Designed to run natively on Linux operating systems

- **Full function 5250 emulator**
  - **This function enables end users to work with i5/OS system screens and run host applications**

- **ODBC driver**
  - **This function enables your Linux PC applications to access information in DB2 UDB for iSeries**

- **iSeries Access APIs**
  - **RmtCmd, NLS, System Object…**

Supported for use on the following:
- **Linux operating systems with Intel processors and on Power PCs**
- **iSeries server logical partition (LPAR)**

Two different versions available

32-bit Linux operating systems
- **V1.10 - available August 2, 2005**
- **5250 emulator to work with iSeries host applications and screens**
- **ODBC driver for accessing the DB2 Universal Database® (UDB) for iSeries**
- **Version 1.10 includes new support for:**
  - **Kerberos and Single Sign-On (SSO)**
  - **Bypass sign-on**
  - **An example SSL configuration**

64-bit Linux operating systems
- **V1.2 - available February 21, 2005**
- **Requires the iSeries Access for Linux 32-bit product to be installed first.**
- **Extended Dynamic Remote SQL (EDRS) driver for Power PC.**
  - **For more information on ERDS, refer to the XDA Web Site and iSeries Infocenter, "Extended Dynamic Remote SQL (EDRS) APIs" in the Programming -> APIs -> Database and File -> Database section.**
- **Supported on SuSE SLES 9 only**

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iSeries Access for Linux – 2006 news

64-bit package is being enhanced to include a 64-bit ODBC driver that will run on 64-bit PowerPC.

- **This driver is functionally equivalent to the 64-bit ODBC driver currently included in iSeries Access for Windows.**
- **The 64-bit ODBC driver will be included in the web download in 1H06**

New 32-bit package (Version 1.12) to be available in 1Q06

- **Mainly fixes and ODBC compatibility with Windows version**

Futures (not committed yet)

- **Ability to run the 64-bit version on 64-bit AMD/Intel EM64T**
- **BIDI support**

Full-function, Native 5250 emulator

The 5250 emulator contains a variety of functions, such as:

- **Ability to provide a workstation/device ID**
- **Both 80 and 132 screen sizes**
- **Keyboard mapping (GUI)**
- **Macro support**
- **Record/playback**
- **Pop-up/pull-down keypads**
- **Screen print**
- **Asynchronously display server messages in the 5250 interface**
- **Option to Bypass OS/400 sign-on screen**
- **Kerberos and Single Sign-on (SSO)**
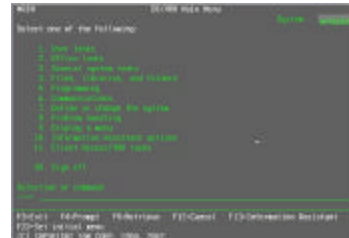
Users Guide explains 5250 emulator functions
www.ibm.com/eserver/iseries
/access/linus/pdf/
iseries_access_5250.pdf

Native ODBC Driver

Extending the reach to iSeries data…

Can run ODBC applications, such as:

- **OpenOffice**
- **ODBC and PHP for Web Serving**
- **ODBC and Perl**
- **unixODBC DataManager**
  - **"Explorer" type of application to manage DSNs**
  - **Run and view results of SQL requests**
  - **unixODBC 2.2.3 version ships DataManagerII with additional features**
- **unixODBC isql**
  - **Command line application**
  - **Neat way to generate simple HTML page with data tables**
- **Your own applications…**

The high-function, best-performing iSeries ODBC driver (included in iSeries Access for Windows) was ported to run on Linux

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Supports 3-tier environments

New ibm5250 -STAND_ALONE command line option.

Enables easy use of:

- **Virtual Network Computing (VNC)**
- **Linux Terminal Server Project (LSTP)**

iSeries

Linux Server

VNC and LSTP users
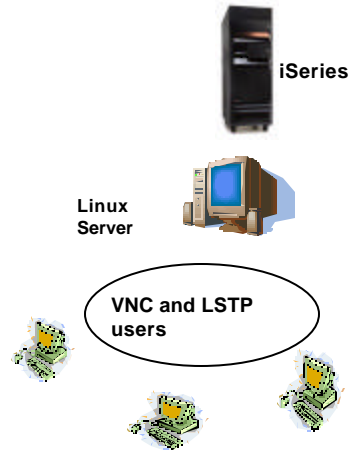
National Language Support - SBCS

5250 emulation menus and messages are available in many national language versions

- **The main emulator window labels and helper applications are translated and will display based on the $LANG system environment variable**

- **The command line value – LANGID may also be used to set the language**

- **English text displayed for missing NLVs**

Language	Locale	Description
2922	pt_PT	Portuguese in Portugal
2924	en_US	English
2925	fi_FI	Finnish
2926	da_DK	Danish
2928	fr_FR	French
2929	de_DE	German
2931	es_ES	Spanish
2932	it_IT	Italian
2933	no_NO	Norwegian
2937	sv_SE	Swedish
2929	de_CH	German Swiss
2940	fr_CH	French Swiss
2942	it_CH	Italian Swiss
2963	nl_BE	Belgium
2966	fr_BE	French in Belgium
2980	pt_BR	Portuguese in Brazil
2981	fr_CA	French Canadian

National Language Support - DBCS

ibm5250 has been tested using the default XIM compliant IME's listed below.

Language	Simplified Chinese	Traditional Chinese	Japanese	Korean
XIME	xcin-zh_CN	xcin-zh_TW	kinput2	nabi
xx (MRI dir /opt/ibm/iseries Access/mri/xx)	zh	zh_TW	ia	ko
LANG	zh_CN	zh_TW	ia_JP	ko_KR
Font Encoding SB	iso8859-1	iso8859-1	jisx0201.1976-0	iso8859-1
Font Encoding SB	gb2312.1980-0	big5-0	jisx0208.1983-0	ksc5601.1987-0

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iSeries Access for Linux (V1.10)

iSeries Access for Linux doesn't ship on iSeries Access media

You can obtain iSeries Access for Linux V1.10 in two ways:

Download from the web

- **www.ibm.com/eserver/iseries /access/linux**

Download via iSeries Access for Web.

- **Select the 'Download' tab, then select the appropriate Access for Linux download**

The 64-bit EDRS Driver, V1.2, is available only as a web download

iSeries Access for Linux (both versions) is fully supported through IBM SupportLine

Access for Web 'Download' Capability

Let users download iSeries Access for Web by using iSeries Access for Web 'Download' feature
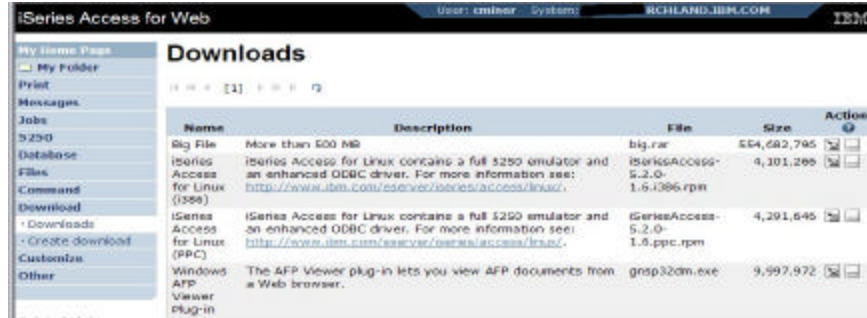
You can also go out to our demo web site at:
http://iseriesd.dfw.ibm.com/webaccess/iWAPackages (userid is WUSER , password is DEMO2PWD) and see Access for Web 'Download' capabilities

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iSeries NetServer: Supports Linux Clients

iSeries NetServer was expanded to support Linux clients.

- **Thus iSeries NetServer provides the same file and print sharing functions to Linux users as it does for Windows users.**

  – **Linux clients (with kernel Version 2.4.3 or higher) with SAMBA (Version 2.0.7 or 2.2) can access the iSeries**

  – **This function was added in OS/400 V5R2**

    - **and a PTF in OS/400 V5R1**

iSeries NetServer

Linux clients

The iSeries administrator can easily control what files and printers a Linux user can access

For additional information, see:
   http://www.ibm.com/eserver/iseries/netserver

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Combine Series Access for Web for a complete Linux solution

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
? **Browse File Shares**
? File Shares

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

Commands
? Run commands
? My commands
? Search

My Personal Folder

Jobs
? User Jobs
? Server Jobs

Customize
? Preferences
? Policies
? Settings
? Transfer configuration

Download

Other
? Bookmarks
? Change Password
? Connection Pool
? Status
? Trace
? About

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

Use iSeries Access for Web with OpenOffice data

? **Upload OpenOffice spreadsheet information to iSeries Database**

? **Download iSeries database information into OpenOffice spreadsheet**

? **Provide pre-defined database requests for users to run**

  – **Shortcuts to My Requests**

Redbook: Linux on IBM i5 Implementation Guide (2nd edition)

This IBM Redbook is about Linux implementation on the new IBM i5. With brand new technologies of POWER5 and IBM Virtualization Engine, Linux on i5 is even more powerful, scalable, and flexible. We also have new versions of Linux distributions that are available for Linux on IBM iSeries. They are SUSE Linux Enterprise Server (SLES) 9 and Red Hat Enterprise Linux (RHEL) 4. This Redbook gets you ready to plan, configure, and install Linux on i5. It discusses migration issues of Linux from previous iSeries systems to i5. It also covers various topics of administrations, operations, and tips and techniques.   Discussions on iSeries Access for Linux, iSeries Access for Web, ODBC driver and 5250 emulation features are also included.

Table of Contents
- **Chapter 1. Introduction to Linux on IBM Eserver i5**
- **Chapter 2. Linux partition planning guide**
- **Chapter 3. System configuration**
- **Chapter 4. Linux installation**
- **Chapter 5. Administration and operations**
- **Chapter 6. Linux migration from iSeries to i5**
- **Chapter 7. iSeries Access for Linux**

To obtain this Redbook, visit
   http://publib-b.boulder.ibm.com/redpieces/abstracts/sg246388.html?Open

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iSeries Access for Linux – Customer Reference

Thanks IBM!!!

Great job folks! For several months I had been looking for a software package to handle IBM's 5250 protocol for Linux. While there are a few projects out there none of them could fit our needs. IBM's developers have done a great job in setting up a very smooth running version of Client Access for Linux. I was even more excited to see that the newest version would work with our LTSP system (Linux Terminal Server Project). We are now serving up 40+ desktops with full iSeries access from one Linux server with plans to expand the user base. Again, Great Job!

**Eric Pell
Manager of Information Systems
Gainey Transportation Services
http://www.gaineycorp.com**

GAINEY
TRANSPORTATION
SERVICES, INC.

I   © 2006 IBM Corporation

Extend iSeries applications to the Web

Internet

Extranets

Intranet

Core LOB
Solutions
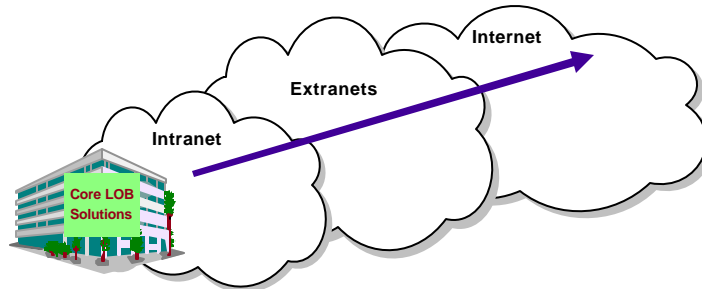
Customers are looking for no network desktop administration and easy access to iSeries information:

- **For a variety of desktop users**
- **For users with no iSeries skills**

Moving to Web and e-business

Customers want a new look on their iSeries and they want extend their information reach...

- **iSeries Access for Web provides alternatives so you can easily take your iSeries to the Web and into e-business**
  - **This helps solve pressing business problems quickly, practically, affordably -- with flexibility for the future**

- **iSeries Access for Web can be the instant 'window' to the iSeries**
  - **It provides completely customizable front page capability and tremendous function and flexibility**

Get rid of those green screens!

22

First you need a web application server

HTTP
Server

Application
Server

Servlet

Web browser

JSPs

Java
Beans

Internet

Enterprise Server
Host applications
Database

Tier 1

Tier 2

Tier 3

© 2006 IBM Corporation
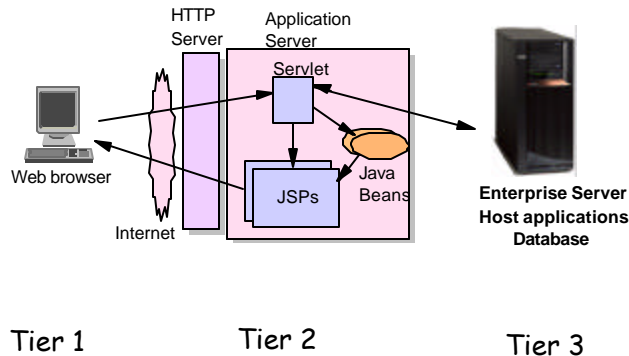
Supported Web Application Servers

The iSeries Access for Web servlet code can be used with any of the following web application servers;

- **WebSphere® Application Server V6.0 – Express for OS/400**
- **WebSphere Application Server V6.0 for OS/400**
- **WebSphere Application Server V5.1 - Express for iSeries**
- **WebSphere Application Server V5.1 for iSeries**
- **WebSphere Application Server V5.0 - Express for iSeries**
- **WebSphere Application Server V5.0 for iSeries**
- **ASF Tomcat**

The iSeries Access for Web portlet code can be used with any of the following portal servers.

- **IBM Workplace Services Express V2.5**
- **WebSphere Portal for Multiplatforms V5.1.0.1**
- **WebSphere Portal Express for Multiplatforms V5.0.2**
- **WebSphere Portal Express Plus for Multiplatforms V5.0**

www-03.ibm.com/servers/eserver/iseries/software/websphere/wsappserver

© 2006 IBM Corporation

http://www-03.ibm.com/servers/eserver/iseries/software/
websphere/wsappserver/

Is your AS/400 or iSeries ready?

Under 512Mb Under 300 CPW	**Bxx, Cxx, Dxx, Exx, Fxx** **S10, S01, Pxx** **S20** / #2161, #2163 **100, 150** **170** / #2159,#2160,#2164,#2289,#2290,#2291,#2292,#2407, #2408,#2409 **200, 20S, 250** **270** / #2422,#2423, #2424,#2248,#2452,#2454	**3xx, 4xx** **500, 510, 50S** **53S** / #2154 **530** / # 2150, # 2151 **600** **620** / #2175,#2179,#2180,#2181 **720** / #2061 **820** / #2425,#2426,#2457,#2456
512Mb–1GB 300-500 CPW	**S30** / #2257 **S20** / #2170,#2165 **170** / #2176,#2183,#2383,#2384,#2385,#2386 **270** / #2250,#2431 **53S** / #2155 **530** / #2150,#2151 **600** / All **620** / #2175,#2179,#2180,#2181 **720** / #2161 **820** / #2425,#2426,#2456,#2457	**WAS Express with few concurrent users**
Over 1GB And 500 CPW	**SB1,SB2,SB3,S20(1),S30(1),S40,170** / #2388 **270** / #2252,#2253,#2432,#2434 **53S** / #2156,#2157 **530** / #2153,#2162 **730,740,800** / #2464 **810,825,870,890,i5 520,i5 550,i5 570,i5 595** / All	**Complex web applications with many concurrent users**

http://www-1.ibm.com/servers/eserver/iseries/software/websphere/lay_foundation.html

Performance Considerations…

Use the IBM eServer Workload Estimator at
http://www-912.ibm.com/wle/EstimatorServlet
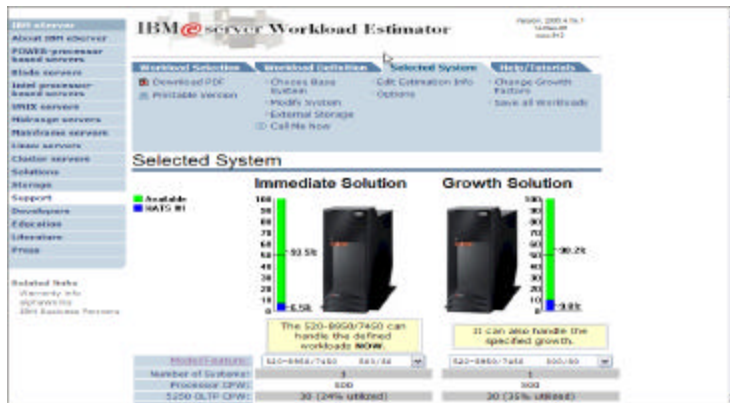
What is iSeries Access for Web?

End users can leverage business information, applications, and resources across an enterprise by extending the iSeries resources to the client desktop through a web browser

i5/OS
V5R3
V5R4

Provides access to iSeries through a browser

- **5250 access**
- **Access to database, integrated file system, printers, output queues, jobs**
- **Can run batch commands and send/receive messages**

It has the following advantages:

- **Is server based**
- **Requires only a browser on the client, no configuration required at desktop, no applets installed on desktop**
- **Uses industry standard protocols - HTTP, HTTPS and HTML**

- **Windows**
- **Linux**
- **Macintosh**
- **Unix**

Netscape

Internet Explorer

Firefox

Opera

Mozilla
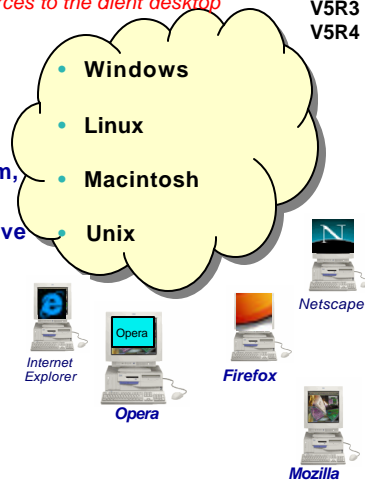
iSeries Access for Web – V5R4

New look for the *Servlet* version!

Web site: www.ibm.com/eserver/iseries/access/web

Functions you can perform with iSeries 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**
? **Browse File Share**

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**

Commands
? **Run commands**
? **My commands**
? **Search**

My Personal Folder

Jobs
? **User Jobs**
? **Server Jobs**

Customize
? **Preferences**
? **Policies**
? **Settings**

Download

Other
? **Bookmarks**
? **Change Password**
? **Connection Pool**
? **Status**
? **Trace**
? **About**

Tables – work with iSeries database information
Servlet version

Action ❓

? **Insert**
? **Update**
? **Quick View**
? **Find** (new in V5R4)
? **Run SQL**
? **Copy Data To Table**

Tables – work with iSeries database information
Servlet version

***Run SQL* has new destination option**

- **Store the output to the iSeries Integrated File System (IFS**

27
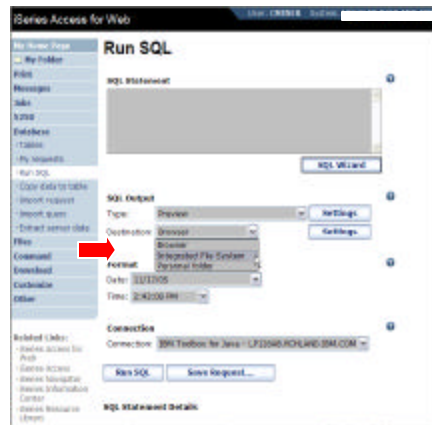
Database – share data source names
Servlet version

Within the Customize tab, Database Connections link, you can now also set up to use WebSphere data source names when creating database connections

- **This enables many different applications running under WAS to use the same data source connections.**
- *WAS data sources are pooled and managed by WAS and should scale better than our original database connections.*

Files: Browse File Share Link

Displays directory that is identified in the user's Policy settings

- **Shipped Default for *PUBLIC is the QIBM folder.**
  - As QIBM is one directory that automatically ships with a 'share' assigned

Browse File Share with Policy setting

Customize → Policies → Files

- **Scroll down to 'Browse File Shares'**
- **Change directory from QIBM to another directory previously set up as a 'shared' directory**
  - **Note: Put in sharename not directory name or path**
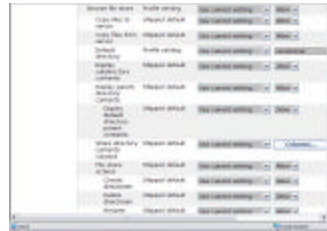
Advantage over 'Browse Files'

- **Already set up to Read Only or Read/Write**
- **Don't have to go into Policies and make any other settings**

Administration of Users

Servlet version

Administrators can now transfer iSeries Access for Web configuration items between i5/OS user profiles on the same system

- **This is useful if you wanted to replicate a category of configuration items to a different user (using Copy action) or transfer ownership of a category of configuration items to a different user (using Move action).**
- **The configuration items supported are: 5250 session configurations and macros, saved commands, database requests, My Folder items, and policies.**

Administration of Users
Servlet version

To copy customized profile settings from one iSeries to another iSeries, you need to use the Export function to put them in a PC file, then use the Import function to put the profile settings on another iSeries.

- **This is useful if you wish to create user group profiles (such as SALES, SECRETARY, etc) and set them up similarly on a variety of systems.**

Import Query Requests
Servlet version

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-ST1)**

*QMQRY and *QRYDFN are the query file types supported

WebSphere Portal Offerings for i5/iSeries

i5 Models 550, 570 and 595

- **Workplace Services Express V2.5 included**
- **WSE has wizards to simplify deployment on IBM i5/OS V5R3 and V5R4**
- **WSE has improved performance and reduces system requirements**
- **WSE enables you to deploy solutions for document management, instant messaging, and portal all on one server**

i5 Model 520

- **Workplace Services Express V2.5 ships with Enterprise Edition**
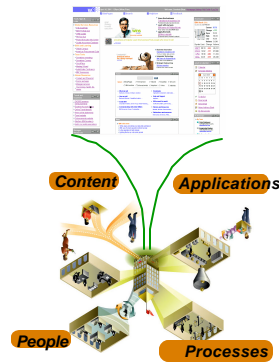
Note: Depending on the iSeries, you may also be entitled to services and education vouchers.

Content   Applications

People   Processes

Portal with iSeries – additional info

Flexible portal licensing *(per-user OR per-processor pricing)*

eServer iSeries systems purchased before July 12, 2005	
eServer iSeries Model/Edition	User licenses of IBM WebSphere Portal – Express Plus V5.0.2 included
eServer iSeries 825, 870, and 890 with Enterprise Edition	20
eServer i5 520 with Enterprise Edition	20
eServer i5 550 with Enterprise Edition	40
eServer i5 570 with Enterprise Edition	60
eServer i5 595 with Enterprise Edition	80

eServer iSeries systems purchased on or after July 12, 2005	
IBM WebSphere Portal – Express Plus	
eServer iSeries Model/Edition	User licenses of IBM WebSphere Portal – Express Plus V5.0.2 included
eServer iSeries 825, 870, and 890 with Enterprise Edition	20
eServer i5 520 with Enterprise Edition	20
IBM Workplace Services Express	
eServer iSeries Model/Edition	User licenses of IBM Workplace Services Express V2.5 included
eServer i5 550 with Solution Edition	40
eServer i5 550 with Enterprise Edition	40
eServer i5 570 with Enterprise Edition	60
eServer i5 595 with Enterprise Edition	80

Portal built for IBM Employees
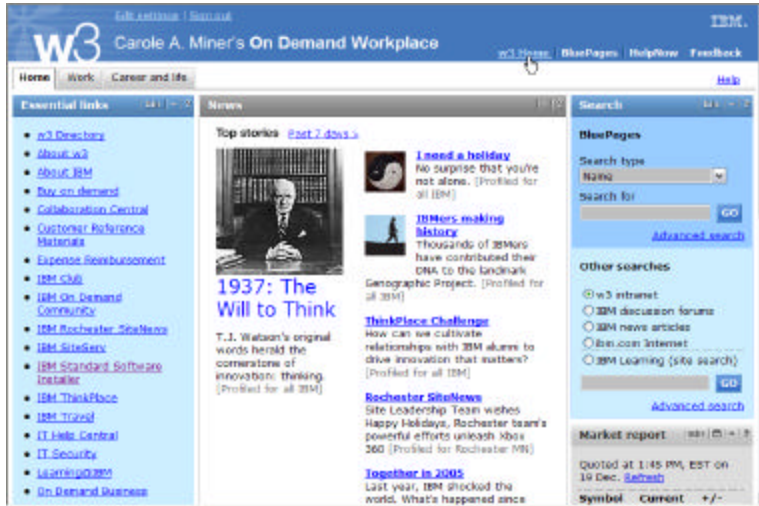
Portal built on i5/OS

iSeries Access for Web Portlets on iSeries Portal
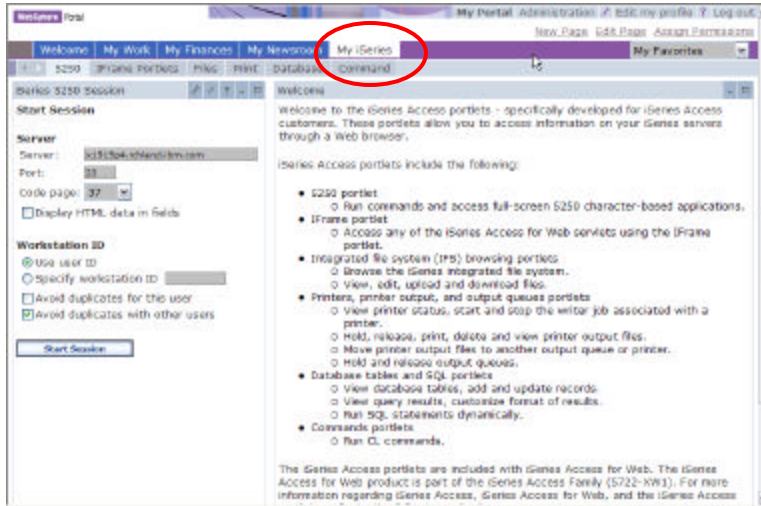
Database – new spreadsheet format
New capability in both the servlet and portlet versions

The OpenOffice spreadsheet format (.ods) is now supported:

- **Servlet version:** *Run SQL* and *Copy Data to Table*

- **Portlet version:** *Dynamic SQL, SQL Query*, and the new *SQL Requests*

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Authentication to iSeries
New capability in both the servlet and portlet versions

Support for Single sign-on (SSO)

- **Previously, iSeries Access for Web used only HTTP basic authentication to retrieve the user-ID and password from the user.**
  - Since this profile information could not be shared with other iSeries web-based applications, this often resulted in the user being prompted multiple times from different applications for the same user-ID and password information.

- **iSeries Access for Web now supports the WAS security model so that single sign-on can be accomplished amongst WAS applications.**
  - This then ties into the i5/OS SSO support (ie, identity tokens that hold user credentials such as password, certificates, EIM that maps a non-iSeries user to an iSeries user profile, and LDAP as the user repository) on the iSeries.

- **New configuration parameters are used to set up this type of environment.**

Authentication to iSeries
New capability in both the servlet and portlet versions

The 5250 emulator function now includes:

- **A checkbox on the 5250 *Start Session* function to Bypass Signon.**
  - **This enables users to bypass the i5/OS sign-on screen.**
- **(Note: the bypass sign-on feature cannot be used if iSeries Access for Web is configured to use application server authentication.)**
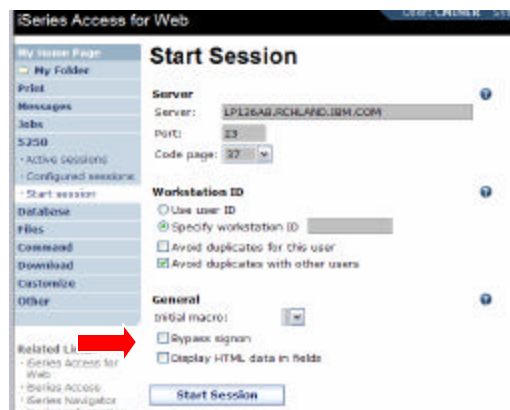
Enhancements to the Portlet version
Portlet version

Database function

- **iSeries SQL**

  - **Requests has been added so you can create, save, manage, and run saved SQL requests.**

- **iSeries SQL Results**

  - **A Viewer has been added so you can view the results of running a saved iSeries SQL request.**
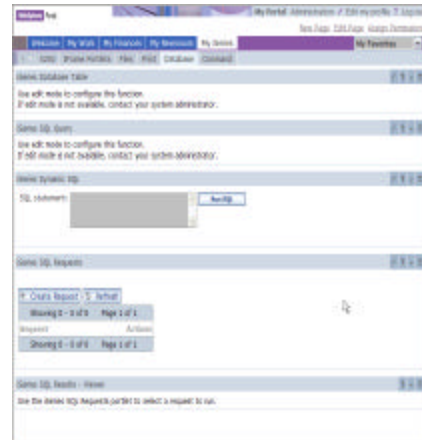
Enhancements to the Portlet version - Files
Portlet version

File function

- **A Zip function has been added so you can zip files in the integrated file system.**

- **You can also add files to your zip file, extract them from an existing zip, and display the contents of a zip file in the integrated file system.**
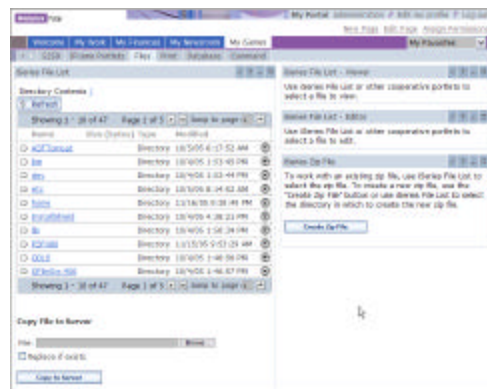
Enhancements to the Portlet version
Portlet version

iSeries Credentials

- **Users can now change their i5/OS user profile password through iSeries Access for Web**

- **It will additionally update the defined vault credentials to match the new password value.**
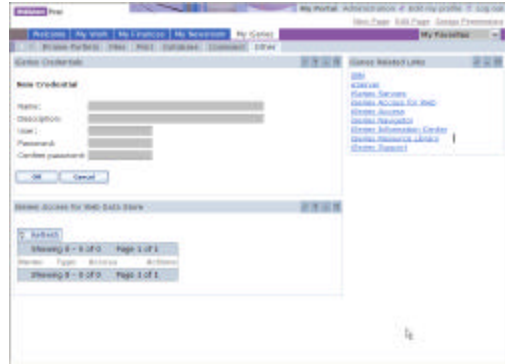
V5R4 iSeries Access for Web Enhancements

Both Servlets and Portlets	Servlets	Portlets
Authentication ? Support Single sign-on (SSO) using WAS security model (EIM, LDAP) ? 5250 Bypass i5/OS sign-on screen **Database** ? Support for OpenOffice Spreadsheet format (.ods) **5250** ? Support DDS HTML keywords ? Display HTTP/HTTPS URL strings as links	**Database** ? Import/run DB2 Query Manager and IBM Query for iSeries queries ? A new output destination of IFS for SQL requests ? New option of 'Find' on Tables link **Administration** ? Can transfer configuration items between i5/OS user profiles ? Can use WebSphere data source names for database connections **Files** ? Browse File Share link added	**Database** ? iSeries SQL Requests added ? iSeries SQL Results Viewer added **Files** ? Zip function added **iSeries Credentials** ? Can change i5/OS password via Access for Web

Customized Home Page

Customized view of the Home Page

- **Could be used as 'entry' point to iSeries**

- **Let's drill down and look at some of this…**

http://iseriesd.dfw.ibm.com/webaccess/iWAHome

Try out Access for Web for yourself!

Start your browser and connect to the following web site:
  http://iseriesd.dfw.ibm.com/webaccess/iWAHome (case sensitive)

User ID = WUSER **Password = DEMO2PWD**	This shows the basic look of Access for Web as we ship it. You can try various functions -- including working with printer output, creating database requests, etc. Click on the 5250 tab, sign onto the iSeries, then start an RPG application called BOATS and run it.
User ID = BOATADMIN **Password = DEMO2PWD**	This is an example of how a customer might design a web page for their use. You will see that an end user could start the same BOATS application by clicking on the 5250 session -- or they could have used WebFacing to run the application. You will also see other links that would let a user work with spoolfile information, work with IFS, run database requests, etc..

Send email to: Demo Support/Dallas/IBM to reset the user-ID "WUSER" on iseriesd.dfw.ibm.com if password gets disabled.

Customer comment

iSeries Access for Web

I read your article in the iSeries400 experts journal (*). This article was very informative and inspired us here at Guelph Hydro to implement the product. We had the product up and running in a day and configured our security using the tools available with the product. I can confidently say that this product is definitely "Cool" and we have already taken advantage of the powerful features of this product. This is a definite "got to have" product for any serious iSeries shop.

You can give your development team two thumbs up on this one.

Thanks again.

> Mike Joaquin
> Guelph Hydro Electric Systems Inc
> Guelph, Ontario Canada

Guelph Hydro Inc.

(*) "A Peek at the Future: iSeries Access for Web" appeared in iSeries 400 Experts Journal, November/December 2003 edition

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iSeries Access for Wireless
5722-XP1

View its web site at: www.ibm.com/eserver/iseries/access/wireless

Application Flexibility, Innovative Technology
Integrated package of wireless functions and middleware

- **iSeries Navigator for Wireless**
  - **Runs on web application server on iSeries (ASF Tomcat (part of 5722-DG1) and WAS (Base and Express)**
  - **View iSeries Navigator tasks, work with monitored jobs and messages, run commands, etc**

- **Series Toolbox for Java Micro Edition**
  - **Runs in the Java Virtual Machine (JVM) on the desktop, and provides access to iSeries through Java ™ classes running on the devices, and ability to write Java Toolbox applications with the customized look for the devices**
  - **Also includes access to iSeries DB/2 from Java application running on a wireless device (can create full-featured JDBC applications with transactions, stored procedures, DB triggers, etc.)**

- *Ships with i5/OS at no additional cost*

- *Delivers strong features to enhance development of wireless applications for use with the iSeries*

---

iSeries Navigator for Wireless

How it works

- Using iSeries Navigator you have set up monitors that you would like to work with via a wireless environment.

- Then when you connect to the iSeries you can see the systems, monitors and tasks that were configured in your list, and if any need attention or not. If a monitor has triggered, a bell will be shown next to the Monitors link.

Enhancements on iSeries Navigator for Wireless

February 2006, V5R3 enhancements via PTF:

? Shared monitor support

In iSeries Navigator for Windows, users have had the ability to view other users' monitors based on the setting set by the owner of the monitor. This is now available in iSeries Navigator for Wireless. You can view other users' monitors as well as start/stop them (if the owner has allowed that level of access).

PTF SI21397 (Product 5722-SS1) required to enable this.

? Easy configuration for when Management Central server is using SSL

In WAS 5.1 and earlier releases, manual configuration steps had to be done to enable iSeries Access for Wireless to connect to an SSL-enabled Management Central server. With WAS 6.0, you cannot connect to an SSL-enabled Management Central at all.

PTF SI20932 (Product 5722-SS1) enables you to use SSL without configuring the application server (provides simple instructions).

June 2004, V5R3 enhancements:

• **Scripts to simplify setup and configuration**

• **Application Administration support**

Supported Devices

Primary Elements
• **Physical Characteristics**
• **Web Browser**
• **Wireless Internet Services**

Compatibility Considerations
• **Mitsubishi T250**
  – Tested through device
  – AT&T PocketNet wireless service
  – Recommended the small font preference
• **Ericsson R280 LX**
  – Tested using simulator
• **Kyocera QCP 6035**
  – Tested through device
  – Palm OS (so it's really a PDA)
• **Other UP.Browser® enabled devices**

Phones

Supported Devices

Primary Elements
- **Web Browser**
- **Wireless Internet Services**

Compatibility Considerations
- **Palm OS Version 3.3**
- **AT&T Wireless**
- **GoAmerica**
- **Sprint**
- **Browsers**
    - AvantGo Version 3 or later
    - EudoraWeb Version 1.1 or later
    - Go.Web Version 6.0 or later - for RIM Blackberry
- **Hardware devices**
    - PalmIII or IIIx with Minstrel III modem
    - PalmV or Vx with Minstrel V modem
    - RIM Blackberry RIM
    - Kyocera QCP 6035 Palm OS

PDA

Supported Devices

Primary Elements
- **Web Browser**
- **Easiest option for intranets!**

Compatibility Considerations
- **Any web browser should work!**

Web Browser

HATS LE – real-time screen conversion

Traditional green screen
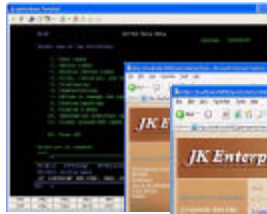
Links
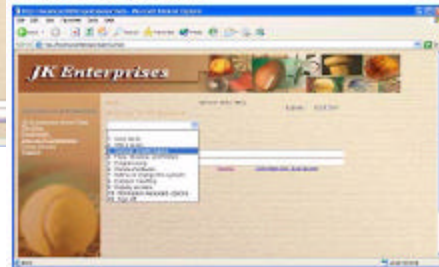
Drop-down menu

HATS LE
on-the-fly
conversion
using
customer
provided
HTML (logo
and graphics)

Host Access Transformation Services Limited Edition (HATS LE)

HATS LE is not included in the iSeries Access Family (5722-XW1) V5R4

HATS LE is being removed from the V5R3 iSeries Access Family deliverables.

- Orders for the V5R3 product placed prior to May 1, 2006 will include HATS LE with other iSeries Access Family products.
- Orders placed on or after May 1, 2006 will not include HATS LE.
- HATS LE will continue to have IBM Technical support as long as OS/400 V5R2 and i5/OS V5R3 are supported.

Suggested Replacements:

- Use the 5250 emulation program in iSeries Access for Web
- If you additionally want to modernize your host applications, then consider using WebSphere Host Access Transformation Server (HATS). For more information on HATS, go to *www.ibm.com/software/webservers/hat*s

Please submit requirements through FITS

Best way to get new function into our products!

Functional enhancements can be submitted via the FITS system.

The url is:

https://www-912.ibm.com/r_dir/ReqDesChange.nsf/
Request_for_Design_Change?OpenForm

Connectivity solutions...

Linux (native)   ➡   **iSeries Access for Linux**

Windows (native)   ➡   **iSeries Access for Windows**

Wireless   ➡   **iSeries Access for Wireless**

Browser-based   ➡   **iSeries Access for Web**

Summary

The way to work with your iSeries is through an easy-to-use and powerful GUI..

- **Your desktop solutions will 'look great'...**
- **You have leading technology at your fingertips that bring exceptional productivity benefits...**
- **You can easily expand your business to the Web**

*Browsers
(Internet Explorer, Netscape, Mozilla, Opera, Firefox...)*
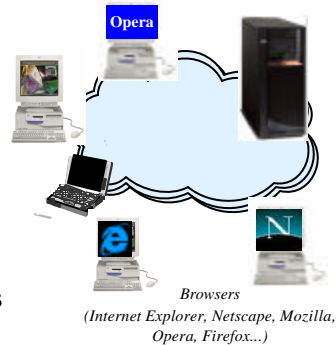
As one customer so aptly said a '*definite "got to have" product for any serious iSeries shop*

Trademarks and Disclaimers