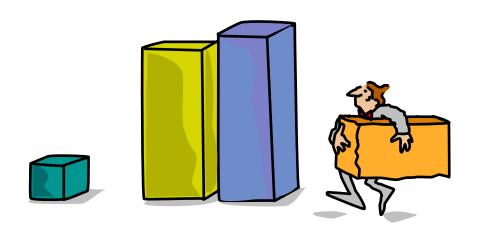


iSeries Access for Windows and Web: What's New?

Linda Hirsch <u>LLHIRSCH@us.ibm.com</u>

http://www.ibm.com/systems/i/software/access

Packaging & Ordering



iSeries 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
	HATS Limited Edition V5.0, 5724-F97-01 (withdrawn 1Q2006)
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
	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

Products - Focus

Description	Product	Product Number	Need 5722-XW1 to use
Family Name	➤iSeries Access Family	5722-XW1	
Windows client	➤iSeries Access for Windows	5722-XE1	Yes (for 5250 and Data Transfer)
Linux client	➤iSeries Access for Linux	5722-XL1	Yes (for 5250)
Browser Access	➤iSeries Access for Web	5722-XH2	Yes
Handheld / Wireless offering	iSeries Access for WirelessiSeries Toolbox for Java ME	5722-XP1	No
i5/OS systems management	iSeries NavigatorOperations ConsoleEZ-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

iSeries Access Family included with new System i Hardware

iSeries Access Family (5722-XW1) unlimited user feature included with the following System i hardware

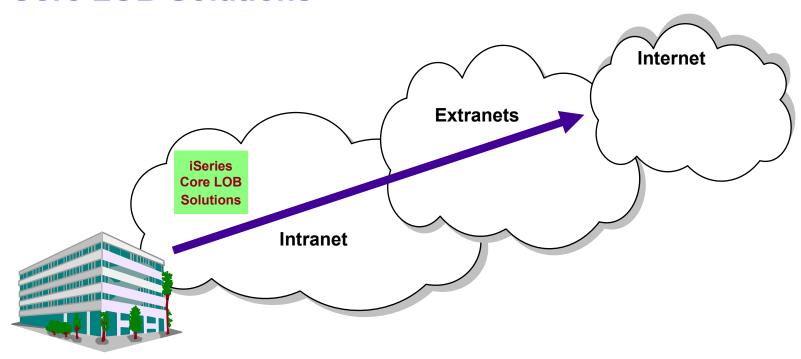
- System i Model 515 Express configurations
 - See Announcement Letter 107-181 dated 4/1/07 for more details
- System i Model 525 Express and CBU configurations
 - See Announcement Letter 107-182 dated 4/1/07 for more details
- System i Model 570 with POWER6 technology
 - See Announcement Letter 107-448 dated 7/31/07 for more details

Any i5/OS user connecting to the above System i models is entitled to use any of the iSeries Access Family products at no additional charge. This includes:

- iSeries Access for Windows
- iSeries Access for Web
- iSeries Access for Linux



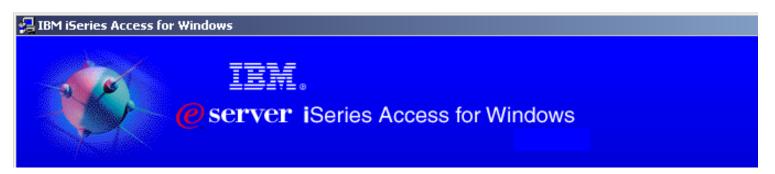
Core LOB Solutions





Looking for highly functional and integrated solution for:

- Windows servers and Windows desktop users
- i5/OS administration and operation



iSeries Access for Windows 5722-XE1 V5R4



www.ibm.com/systems/i/software/access/windows

Integrating native Windows with System i

If you want a single solution for working with all System i 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

Supports Microsoft operating environments...

Microsoft Transaction Services (MTS)

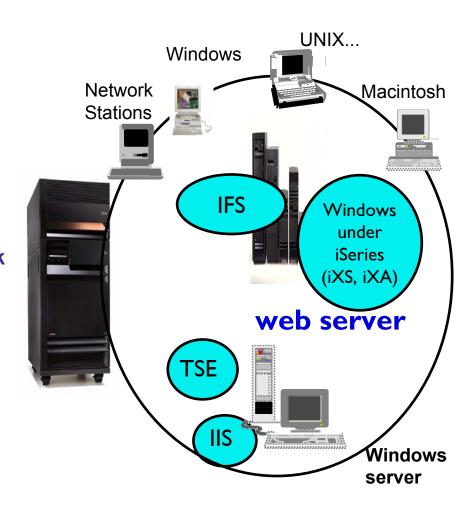
 example, an Auction House application where may need to back out transactions (ie, 2-phase commit)

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)



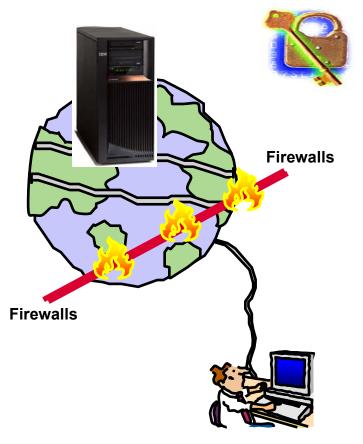
Supports leading network and security offerings...

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 System i address when on Internet



If you do it on System i, 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
- Windows Vista December 2006

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/systems/i/software/access/supportedos.html for the latest information

Windows Vista:

- Ultimate and Premium Editions are supported.
- V5R4 iSeries Access for Windows with service pack SI25949 or later
 - PC5250 requires service pack <u>SI27741</u>, available July 2007

Refer to

http://www.ibm.com/systems/i/software/access/supportedos.html

and

Informational APAR II14239 linked from that page

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

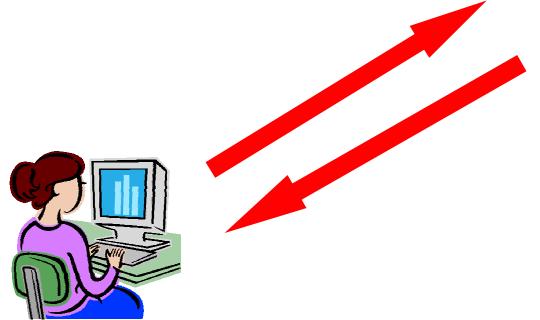


The 5250 emulator (PC5250), integrated with iSeries Access for Windows, is the Version 5.8 of IBM Personal Communications

Data Transfer

- Copy Data to i5/OS database
- Copy Data from i5/OS database

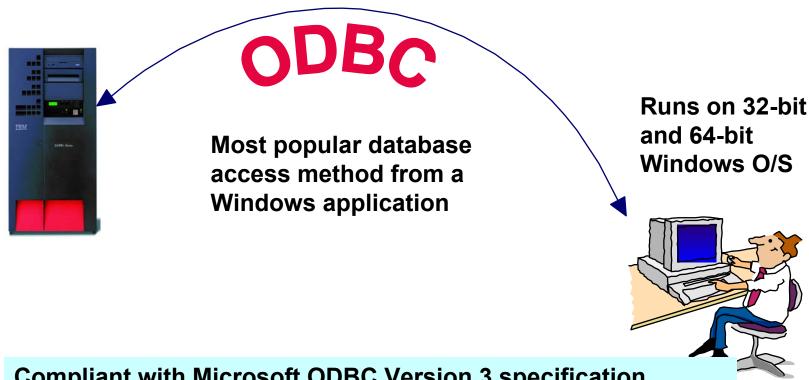




Data Transfer Enhancements – V5R4, V5R3, V5R2

V5R4	V5R3	V5R2
Enhancements	Enhancements	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 ODBC Driver



Compliant with Microsoft ODBC Version 3 specification

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

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)

iSeries OLE DB Provider



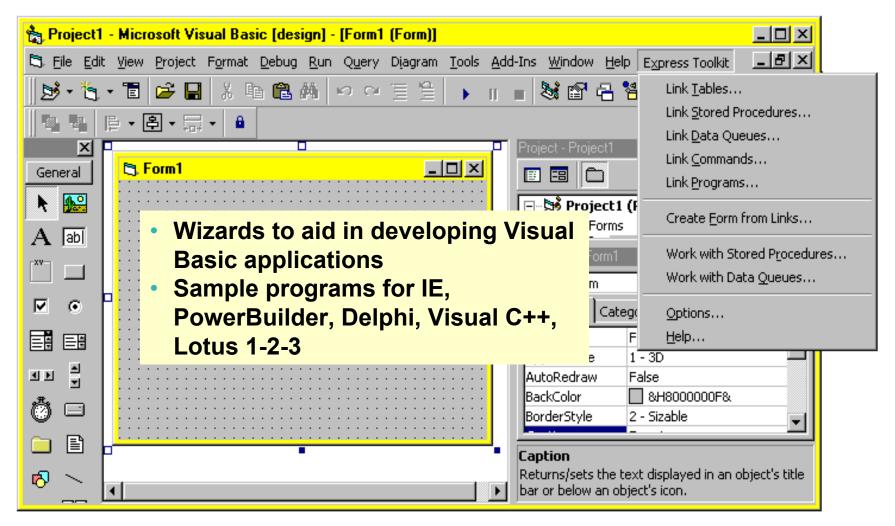
- Record level access
- Data Queues
- Stored Procedures
- SQL
- Remote Commands
- ODBC



plus add-ins for Visual Basic

OLE DB Provider supports OLE DB 2.5

Visual Basic Programming Aides



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)
© IBM Corporation 2007		

iSeries .NET Data Provider



NET

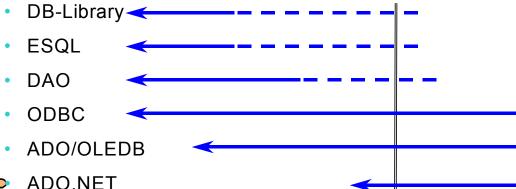
The next big wave in Microsoft technology

Runs on 32-bit and 64-bit Windows OS



Microsoft's Technology Roadmap





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 Ihreads IASPs (multiple databases) Stored Procedure Support Iseries-specific Properties User-Defined Types Supported later via SP SI15176 System Naming (/) Library List Large Objects (LOBs)

.NET Data Provider Planning Statement

In V5R4, .NET Data Provider supports ADO .NET 1.0

In the next release, .NET Data Provider will support ADO .NET 2.0

Planning statements:

http://www.ibm.com/systems/i/software/access/planning.html

Redbook - SG24-6440

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.

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.



http://www.ibm.com/systems/i/software/access/windows/tech_preview.html

Windows Installer Technology

- V5R4 iSeries Access for Windows adds Windows Installer capability
 - Industry standard for installations on the Windows platform
- Provides standard mechanisms to...
 - manage installations
 - customize install packages with "transforms"
 - set install policies
 - install service packs
 - do silent installations more simply no more response files!

 Deploy to multiple desktops with several deployment systems, such as Active Directory and Systems Management Server

Planning Statement

- The V5R4 implementation is offered as a Technology Preview
- In the next release, iSeries Access for Windows will support the Windows Installer technology with all components and in all supported languages

Planning statements:

http://www.ibm.com/systems/i/software/access/planning.html

Technology Preview

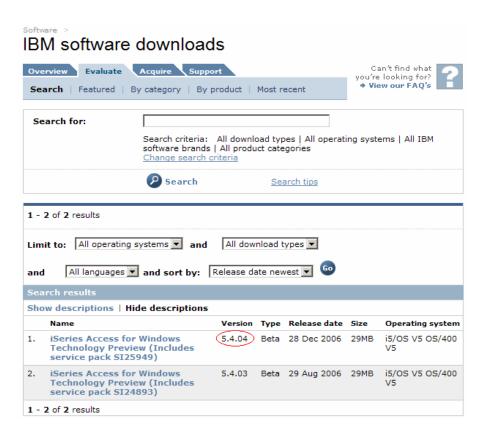
- Level of code is V5R4 GA iSeries Access for Windows with the latest service pack integrated into the installation image
- Supports the 32-bits versions of Windows XP, Windows 2000, and Windows Vista
- Available as a web download

Limitations in Tech Preview, removed in next release:

- iSeries Navigator components not included
- English only
- Check Service Level not supported

How to get the Tech Preview

- http://www.ibm.com/systems/i/software/access/windows/tech_preview.html
 - > Download
- Select the latest service level available.



What is the MSI package?

- A Windows Installer package is made up of an MSI file and source files
- An MSI file is a relational database. The tables within the MSI database describe:
 - installation logic, such as the sequence of actions
 - metadata about the resources that are to be installed
- "Feature":
 - An application's functions are separated into features (components)
 - Features can be installed independently
- "Public properties":
 - Variables used at install time that can be set by the end user through the command line or in transforms
 - Define installation settings, such as target directory, type of install, list of features to be installed
- "Transform":
 - The mechanism to customize the installation

Installation Options

- Complete
 - Installs everything
- Custom
 - Allows end user to select what to install
- PC5250 User
 - Only 5250 emulation installed



Installation Types

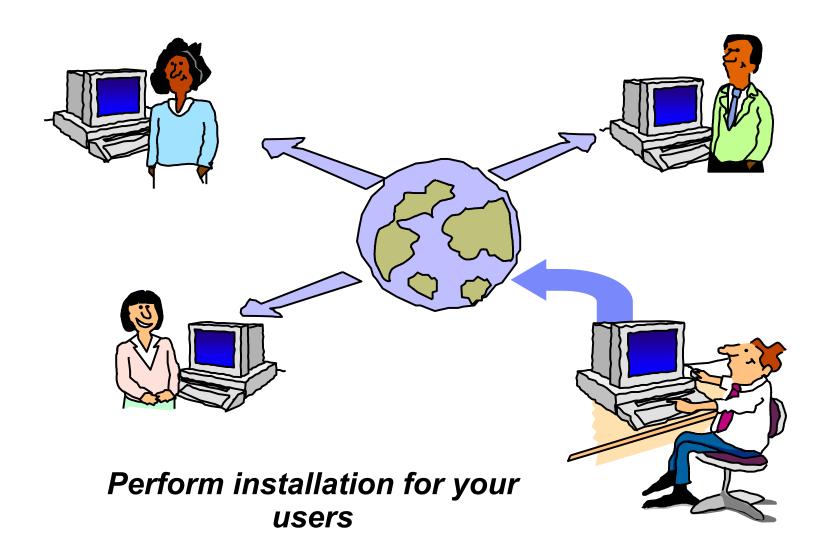
New installation of iSeries Access for Windows

Upgrade Install

- From one release of iSeries Access for Windows to the next
- Intend to always support N-2 to N
- Default is to upgrade to new release with same set of components
- Can add additional features during upgrade
- Can remove existing features during upgrade process

Maintenance Install

- Modify
 - Add and remove individual features
 - New features are installed with the latest service pack level applied
- Repair
 - Reinstalls the product
 - Recreates files/registry entries that were accidentally deleted



Transforms:

Customizing the installation package

Transforms

Would you like to control which iSeries Access for Windows features your users install?



Use <u>Tranforms</u> to:

 Modify the MSI package by excluding the unwanted features

Apply the transform to installations across your network

Users can easily install iSeries Access functions by selecting a single option



What are Transforms?

The means to customize the installation package

- A transform is a file that describes modifications to the MSI DB
 - Applied at install time
- Running the "Tailored installation wizard" is not necessary

Allow administrators to change the default settings of the installation package.

- Create customizations for different groups in the organization by defining different combinations of features.
- Pre-select features, deselect features, hide features from the features selection tree on custom installation

Many tools are available to create transforms

- InstallShield
- Microsoft Orca is available at no cost

What are Transforms?



- Transforms are applied at install time
- The original MSI file is not altered
- The transform file is saved along with the MSI file, and gets applied every time an install task is started

Steps to create your own transform

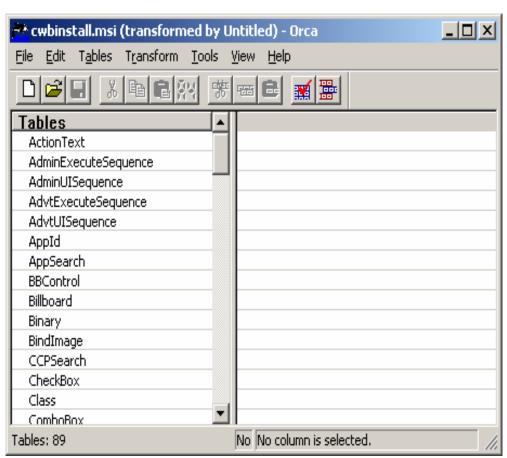
1. Open cwbinstall.msi in transform mode

Open Orca.

Open and browse for cwbinstall msi.

From the Transform menu, select New Transform.

This will turn Orca into
Transform mode, and now you
can start modifying the MSI
file.



Steps to create your own transform (continued)

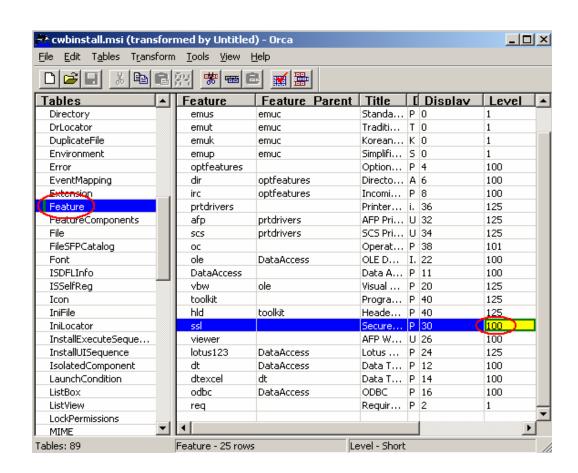
2. Modify the tables

From the left pane, select the table to modify.

In the right pane, you can modify an existing field's value, as well as add and remove rows.

Tables with modifications are indicated by a green mark next to them.

In the example, we are changing the Level of feature ssl from 125 to 100 so it gets preselected.



Steps to create your own transform (continued)

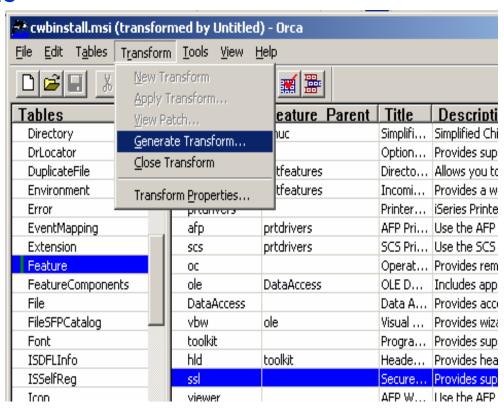
3. Generate the transform file

From the Transform menu, select Generate Transform.

Give your transform a meaningful name.

Transforms are created with a file extension of .MST.

Make sure the transform file is saved to the install image directory.



Apply the transform

Two ways to apply the transform:

1. Apply it at the command line:

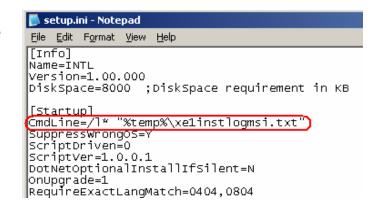
Type:

setup /vTRANSFORMS=odbc_pc5250_only.mst

or

- 2. Modify setup.ini, and users will get the transform automatically:
 - a. Open setup.ini and locate the CmdLine key, under the [Startup] section.
 - **b. Append the string** TRANSFORMS= odbc_pc5250_only.mst **to CmdLine.**
 - c. When user runs setup.exe, the transform will get applied.



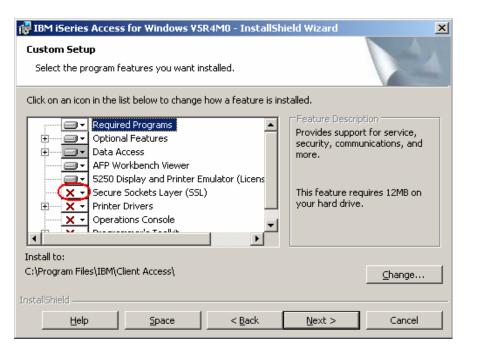


Apply the transform (continued)

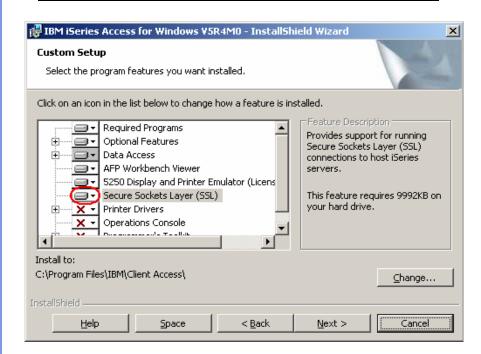
In a command prompt window, type

setup /vTRANSFORMS=MyTransform.mst

\> setup.exe



\> setup.exe
/vTRANSFORMS=MyTransform.mst



Example 1

Administrator only wants to provide ODBC and PC5250 for a group of users

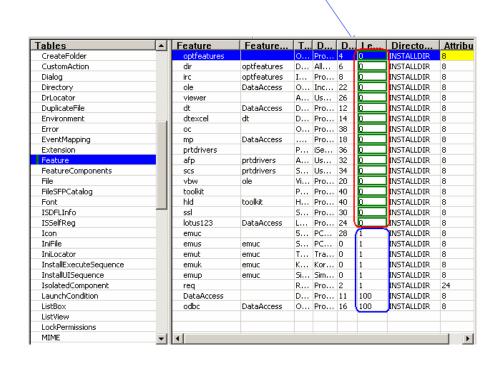
- Create a transform that enables end users to install only ODBC and PC5250.
- Disable all features you don't want users to use.
- No need to create a tailored image. The transform can be applied to the original image.

Example 1 (continued)

A level of 0 disables the feature

- 1. Open cwbinstall.msi and select Transform>New Transform.
- 2. Open the Feature table.
- 3. Change the Level field to 0 for all features, except the ones you want to install:
 - req
 - emuc, emuk, emup, emus, emut
 - DataAccess
 - Odbc

Save the transform as odbc_pc5250_only.mst



Example 1 (continued)

Apply the transform

Two ways to apply the transform:

1. Your users can apply it at the command line:

Type:

```
setup
/vTRANSFORMS=odbc_pc5250_only.ms
t
```

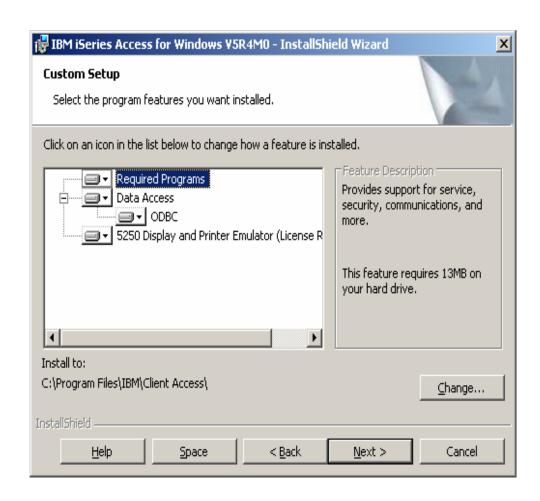
or

- 2. You can modify setup.ini, and users will get the transform automatically:
 - a. Open setup.ini and locate the CmdLine key, under the [Startup] section.
 - **b. Append the string** TRANSFORMS= odbc_pc5250_only.mst **to CmdLine**.
 - c. When user runs setup.exe, the transform will get applied.

```
C:\MyImage>setup /vTRANSFORMS=odbc_pc5250_only.mst
```

Example 1 (continued)

- Complete option selected: only enabled features will be installed.
- Custom option selected:
 only enabled features will be
 visible in the feature
 selection tree.
- If installation is launched with basic or no user interface, only enabled features will be installed.



Refer to the Appendix for transform example:

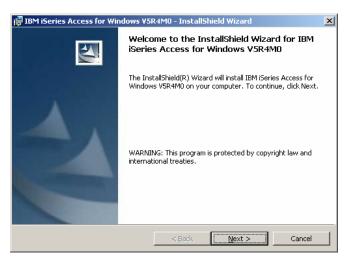
Example 2: Install with only PC5250 predefined workstation file

User Interface Levels

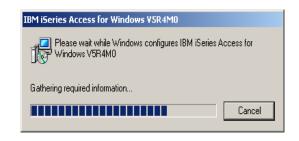
In Windows Installer, an installation's user interface can have several levels:

Level	Command line option	UILevel value	Description
Full (default)	/qf	5	The Install Wizard is launched. User can change all installation options.
Basic	/qb	3	Only progress bar and error messages are shown. User still can cancel instalation.
Silent	/qs	2	No dialogs displayed. There's no indication about installation in progress.

Full user interface



Basic user interface



User Interface Levels (continued)

By default, launching setup.exe will initiate with full user interface.

The level of user interface can be changed in several ways:

- At the command line
 - Type setup /v/"... q[f|b|n]"
- **In** setup.ini:
 - Append the string $\sqrt{q[f]b|n]}$ to the CmdLine key.
- With a transform
 - Create a transform that modifies the value of property UlLevel in the Property table.

Command line options

setup.exe command line options:

- /s setup.exe initialization dialogs are suppressed. This doesn't affect the internal UI level.
- /v passes arguments in to cwbinstall.msi. If the arguments being passed contain spaces, then they must be enclosed in quotation marks.

cwbinstall.msi command line arguments (passed in through the /v option):

 $\sqrt{q[f]b|n}$ - sets the installation UI level.

/I[arguments] log_name.ext - creates a log file.

TRANSFORMS=transform1.mst,transform2.mst... - applies the list of transforms to the MSI.

ADDLOCAL=feat1,feat2,... - sets the specified features to be installed.

REMOVE=feat1,feat2,... - removes the specified features.

CWBINSTALLTYPE=[Custom|Complete|PC5250User] - sets the install type:

- Custom: installs the default features –and in full UI, allows users to change the feature selections.
- Complete: installs all features
- PC5250: installs required programs and PC5250 emulation support.

Command line options

Examples:

setup.exe /s/v"/qn" - Initiates a completely silent installation (suppreses setup.exe initialization dialogs and wizard dialogs).

setup.exe /v"ADDLOCAL=req,emuc,mp /l*v log.txt" - Initiates a full UI Installation; preselects "req" (Required Programs), "emuc" (PC5250 emulator) and "mp" (.NET managed provider) features; creates a verbose log called log.txt; user is able to change the features selections.

setup.exe /v"CWBINSTALLTYPE=Complete /qb" - Install all features; show only progress bar; user won't be able to change the features selections.

Logging

By default two log files are created i the current user's temporal folder:

- xe1instlog.txt keeps history of all installation activity.
- xe1instlogmsi.txt logs the last install task.

xe1instlogmsi.txt is specified in setup.ini, in the CmdLine key:



- The /I option is used to specify logging settings.
- The * flag logs all information, except for verbose output. It's the same as specifing /liwearucmop.
- "%temp%\xe1instlogmsi.txt" is the path to the log file.

Logging

You can change the /I settings in setup.ini.

You can override the default logging settings at the command line, by running setup.exe with the /l option; for example:

- setup /v"... /l*v log.txt" creates a verbose log called log.txt in the current directory.
- setup /v"... /laep log.txt" logs error messages, start up of actions and properties' values only.

You can set the Logging policy to default the logging options for all users

- 1. Open the key HKEY_LOCAL_MACHINE\SOFTWARE\Policies\Microsoft\Windows\Installer
- 2. Create a string value called Logging and set it to the parameters you want.
- 3. If you want a full, verbose log, set Logging to voicewarmup
- 4. You cannot write * or + in the registry.

Whenever a MSI package is invoked, a log file is created in the temp directory with a name of MSIxxxxx.log, where xxxxx are random characters.

You also can set this policy within a GPO in Active Directory.

Deploy iSeries Access for Windows using Active Directory

iSeries Access for Windows can be deployed using Active Directory

Active Directory is Microsoft's directory service

Windows 2000 Server and Windows Server 2003

Some of the goals of Active Directory are:

- Centralized management of resources, services, and users on a network
- Access control to resources
- Central software distribution to PCs in the network

Deploy iSeries Access for Windows using SMS

Microsoft Systems Management Server (SMS) is software to centrally managing client computers and servers.

Some features of SMS are:

- Hardware and software inventory
- Software distribution
- Software metering
- Security

SMS enables scheduled installations, deployment based on software or hardware criteria and monitoring.

Links:

- SMS concepts:
 - http://www.microsoft.com/technet/prodtechnol/sms/sms2003/cpdg/default.mspx?mfr=true
- Distributing Windows Installer packages
 http://www.microsoft.com/technet/sms/20/deplymsi.mspx

Install from a Network Share

You can share an installation image residing on the network, either at your NetServer or a Windows share.

Your desktop users can map a drive to the network share.

Users then will run setup.exe from the network drive to start iSeries Access for Windows installation.

If one or more transforms must be applied:

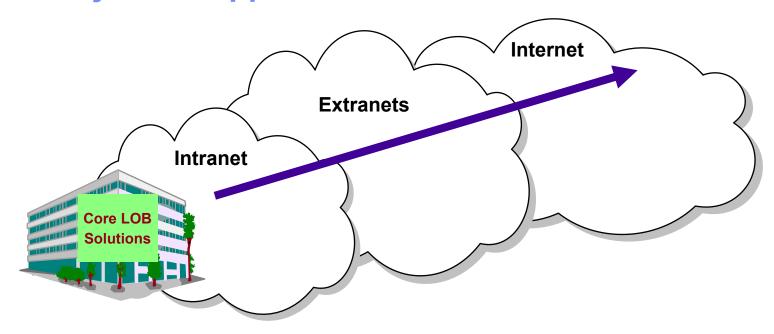
- Make sure that the transform file(s) are located in the source directory.
- Two ways to apply the transform:
 - Users type setup.exe /v/"TRANSFORMS=transform1.mst, transform2.mst..."

or

- Modify setup.ini to include any command options in the CmdLine key.

Questions on Windows?

Extend System i applications to the Web





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

What is iSeries Access for Web?

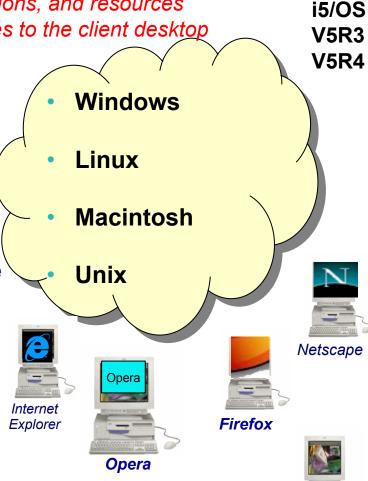
End users can leverage business information, applications, and resources across an enterprise by extending the iSeries resources to the client desktop through a web browser

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

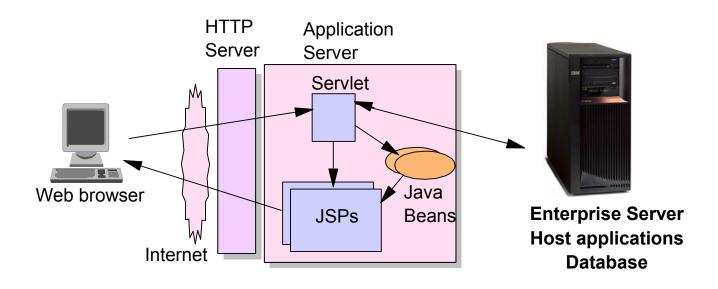
It has the following advantages:

- 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



Mozilla

First you need a web application server



Tier 1 Tier 2 Tier 3

Supported Web Application Servers

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

- Integrated web application server available October 10, 2006
- WebSphere® Application Server V6.1 and V6.0 – Express for i5/OS
- WebSphere Application Server V6.1 and 6.0 Base and Network Deployment
- WebSphere Application Server V5.1Express for iSeries
- WebSphere Application Server V5.0Express
- WebSphere Application Server V5.1 and 5.0 Base and Network Deployment Editions
- ASF Tomcat

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

- IBM Workplace Services Express V2.6 (V5R4 iSeries Access for Web)
- IBM Workplace Services Express V2.5
- WebSphere Portal for Multiplatforms V6.0
- WebSphere Portal for Multiplatforms V5.1.0.1
- WebSphere Portal Express for Multiplatforms V5.0.2
- WebSphere Portal Express Plus for Multiplatforms V5.0

PTFs required for latest web app server and portal support: http://www.ibm.com/systems/i/software/access/web/servicepacks.html

4Q2006 Announcement: "System i Web Enablement Made Easy"

Two pieces related to iSeries Access for Web:

- 1. iSeries Access for Web supports the use of a Web application server integrated with i5/OS.
 - Configure iSeries Access for Web without having to install or configure a Web Application server
- 2. Web Enablement for i5/OS: Express Runtime Environment
 - Auto configure of Web servers, components, applications using WAS – Express V6.0
 - iSeries Access for Web is part of the environment

Refer to:

http://www.ibm.com/systems/i/software/access/web/servicepacks.html

Integrated Web application server What is it, does iSeries Access for Web support it?

What is the i5/OS integrated Web application server?

- A web application engine much like ASF Tomcat
- Uses minimal system resources, similar to ASF Tomcat
- Minimal effort by an Administrator to maintain
- V5R4 is the last release i5/OS will contain ASF Tomcat

How is it packaged?

- 5722-DG1 IBM HTTP Server for i5/OS
- Available in the DG1 group PTF V5R4 SF99114 level 6 or later

iSeries Access for Web support

- Only V5R4 iSeries Access for Web supports the i5/OS integrated Web application server
- V5R4 iSeries Access for Web can be installed and is supported on...

V5R3 i5/OS

V5R4 i5/OS

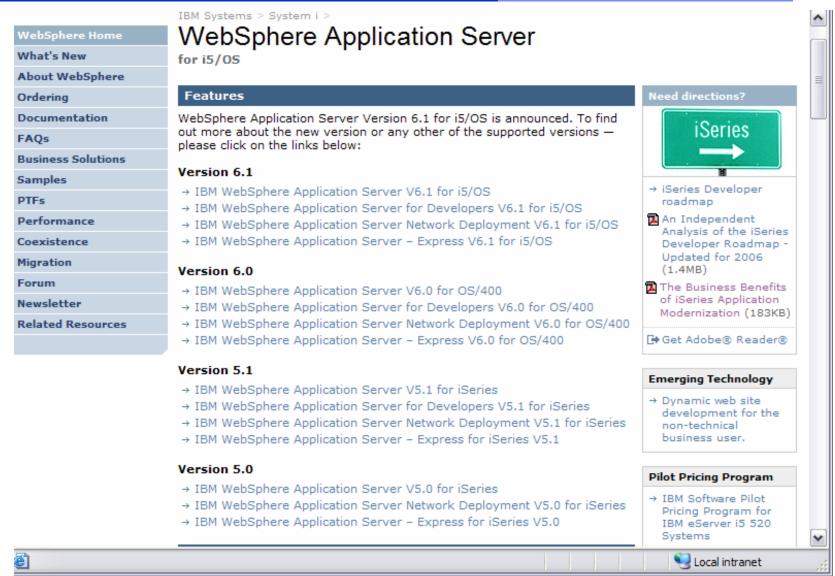
Integrated Web application server iSeries Access for Web within this environment

To use iSeries Access for Web within the i5/OS integrated Web application server:

- Stop the Web Administration for i5/OS ENDTCPSVR SERVER(*HTTP) HTTPSVR(ADMIN)
- Load/apply latest 5722-DG1 group PTF (review cover letters for any additional information)
 V5R4 SF99114
- Load/apply latest <u>V5R4</u> iSeries Access for Web PTF SI25551 or later
- Configure iSeries Access for Web
 QSH
 cd /QIBM/ProdData/Access/Web2/install
 cfgaccweb2 –appsvrtype *INTAPPSVR
- Start the Web Administration for i5/OS STRTCPSVR SERVER(*HTTP) HTTPSVR(*ADMIN)
- Start preconfigured HTTP web server STRTCPSVR SERVER(*HTTP) HTTPSVR(IWADFT)
- Open a browser to iSeries Access for Web using preconfigured HTTP:port <a href="http://<system_name>:2020/webaccess/iWAMain">http://<system_name>:2020/webaccess/iWAMain

Done!

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



Is your AS/400 or iSeries ready?

S30 / #2257

Under 512Mb Under 300 CPW

Bxx, Cxx, Dxx, Exx, Fxx 3xx, 4xx S10, S01, Pxx 500, 510, 50S **S20** / #2161, #2163 53S / #2154 100, 150 **530** / # 2150, # 2151 170 / 600 #2159,#2160,#2164,#2289,#2290,#2291,#2292,#2407, **620** / #2175,#2179,#2180,#2181 #2408,#2409 720 / #2061 200, 20S, 250 **820** / #2425,#2426,#2457,#2456 **270** / #2422,#2423, #2424,#2248,#2452,#2454

512Mb-1GB 300-500 CPW \$20 / #2170,#2165 170 / #2176,#2183,#2383,#2384,#2385,#2386 270 / #2250,#2431 53\$ / #2155 530 / #2150,#2151 600 / All 620 / #2175,#2179,#2180,#2181 720 / #2161 820 / #2425,#2426,#2456,#2457

WAS Express with few concurrent users

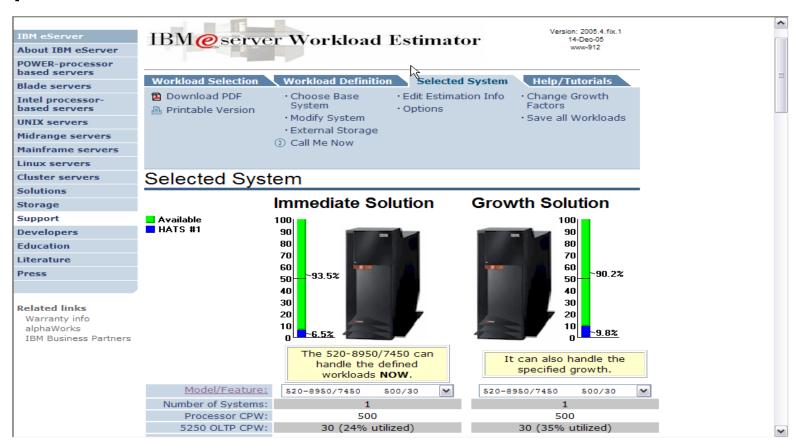
Over 1GB And 500 CPW SB1,SB2,SB3,S20(1),S30(1),S40,170 / #2388 270 / #2252,#2253,#2432,#2434 53S / #2156,#2157 530 / #2153,#2162 730,740,800 / #2464 810,825,870,890,i5 520,i5 550,i5 570,i5 595 / All

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 Systems Workload Estimator at http://www-912.ibm.com/wle/EstimatorServlet



System i Software Requirements



Product Number	Product Name	Option	\$
5722-SS1	V5R3 iSeries Access for Web: V5R2 OS/400 or V5R3 i5/OS V5R4 iSeries Access for Web: V5R3 and later i5/OS	Base	w/HW
5722-SS1	I5/OS - Extended Base Directory Support	3	N/C
5722-SS1	I5/OS - AFP Compatibility Fonts	8	N/C
5722-SS1	I5/OS - Host Servers	12	N/C
5722-SS1	Operating System/400 QShell Interpreter	30	N/C
5722-SS1 5722-AC3	If you plan to use Secure Sockets Layer (SSL): OS/400 Digital Certificate Manager Cryptographic Access Provider (128-bit)	34	N/C N/C
5722-DG1	IBM HTTP Server for iSeries	Base	N/C
5722-JV1	Developer Kit for Java Developer Kit for Java Version 1.2 Developer Kit for Java Version 1.3 Developer Kit for Java Version 1.4 (Check WebSphere doc for required version)	Base 3 5 6	N/C N/C N/C N/C
5722-JC1	Toolbox for Java	Base	N/C
5722-TC1	TCP/IP Connectivity Utilities for iSeries	Base	N/C

System i Software Requirements (continued)

Product Number	Product Name	Option	\$
5722-XW1	iSeries Access Family	Base	\$
5722-XH2	 iSeries Access for Web Ships with 5722-XW1 iSeries Access Family V5R3 iSeries Access for Web runs on OS/400 V5R2 and i5/OS V5R3 V5R4 iSeries Access for Web runs on i5/OS V5R3 and V5R4 	Base	part of XW1
5722-IP1	IBM Info Print Server (Optional enables best PDF output: - is not required to view PDF output - is required for V5R4 PDF Printer support)	Base	\$

System i Software Requirements (continued)

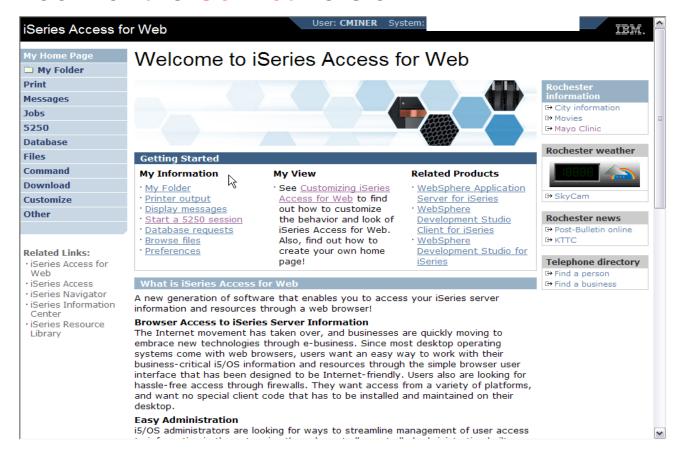
Product Number	Product Name	Option	\$
5733-W61 5733-W60 5722-E51 5733-W51 5722-IWE 5733-WS5	One, or more, of the following web servers WebSphere Application Server V6.1 for i5/OS (all three editions) WebSphere Application Server V6.0 for OS/400 (all three editions) WebSphere Application Server V5.1 - Express for iSeries WebSphere Application Server V5.1 for iSeries (Base and ND) WebSphere Application Server V5.0 - Express for iSeries WebSphere Application Server V5.0 for iSeries (Base and ND)	See documentation	
5722-DG1 5722-DG1	Apache Software Foundation Tomcat Integrated Web Application Server		
* * *	WebSphere Portal for iSeries (Express and Express Plus) V5.0.2.2 WebSphere Portal Enable for Multiplatforms V5.1.0.1 WebSphere Portal V6.0 IBM Workplace Services Express V2.5, V2.6		

Refer to the documentation for the individual web serving environments additional requirements that may not be listed above.

WebSphere	http://www.ibm.com/servers/eserver/iseries/software/websphere/wsappserver/
ASF Tomcat	http://www.ibm.com/servers/eserver/iseries/software/http/
Portal V5.0.2.2	http://publib.boulder.ibm.com/pvc/wp/502/smbi/en/InfoCenter/index.html
Portal V5.1.0.1	http://publib.boulder.ibm.com/infocenter/wp51help/index.jsp
Portal V6.0	http://publib.boulder.ibm.com/infocenter/wpdoc/v6r0/index.jsp
Workplace V2.5	http://publib.boulder.ibm.com/infocenter/wseic/v2r5/index.jsp
Workplace V2.6	http://publib.boulder.ibm.com/infocenter/wseic/v2r6/index.jsp

iSeries Access for Web - V5R4

New look for the *Servlet* version



Web site: www.ibm.com/systems/i/software/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 with "**" 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

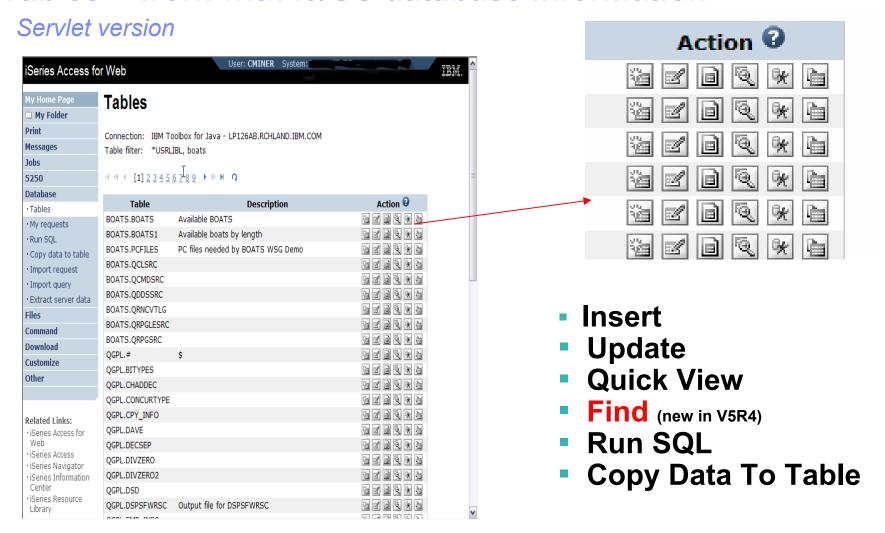
- Preferences
- Policies
- Settings
- ** Transfer configuration data

Download

Other

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

Tables – work with i5/OS database information

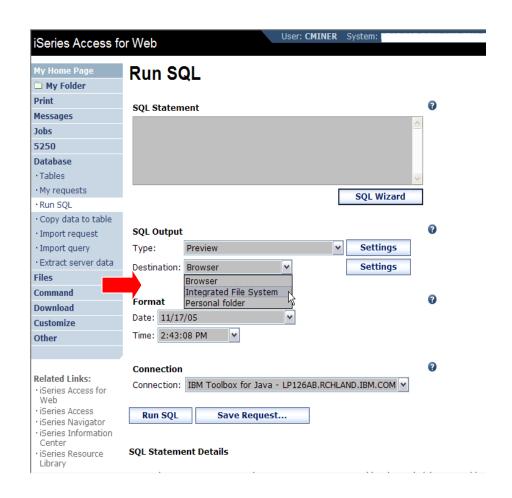


Tables – work with iSeries database information

Servlet version

Run SQL has new destination option

 Store the output to the iSeries Integrated File System (IFS

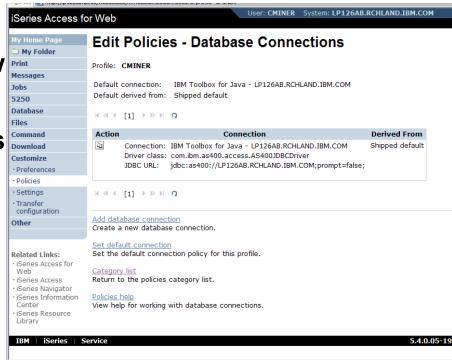


Database – share data source names

Servlet version

New in V5R4: 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.



Database: 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



Files: "Browse File Share" Link

New in V5R4: 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



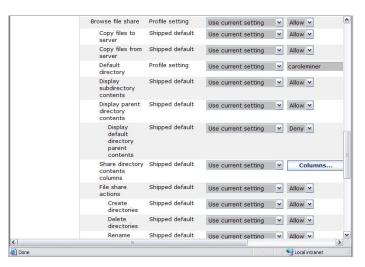
Browse File Share with Policy setting

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 share name 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



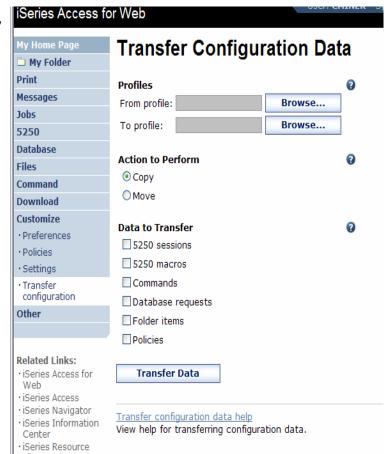


Administration of Users

Servlet version

New in V5R4: 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.

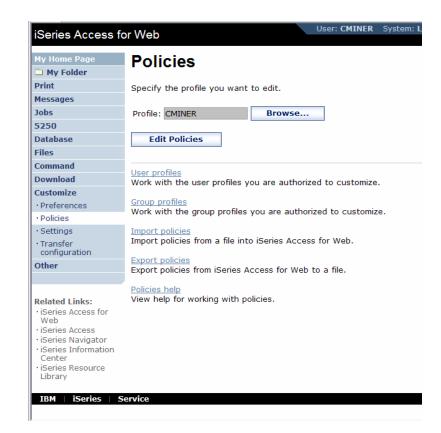


Administration of Users

Servlet version

To copy customized profile settings from one System i to another System i, 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.



WebSphere Portal Offerings for System i

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 Content

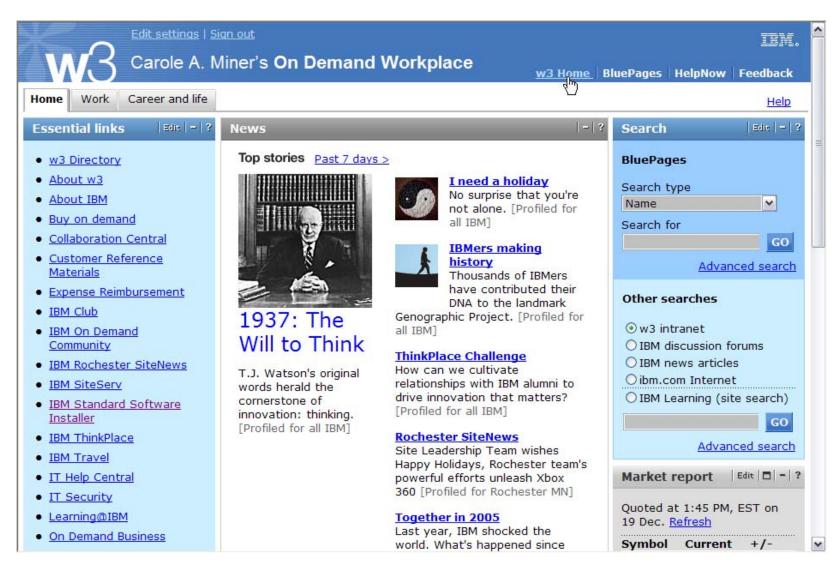
Content

People

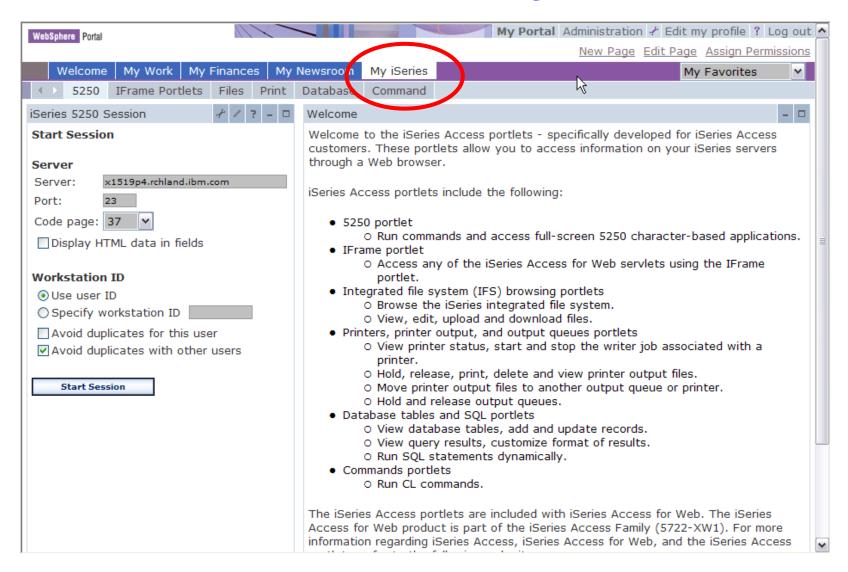
Processes

Note: Depending on the System i, you may also be entitled to services and education vouchers.

Portal built for IBM Employees



iSeries Access for Web Portlets on System i 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



Authentication to i5/OS

New capability in both the servlet and portlet versions

Support for Single sign-on (SSO)

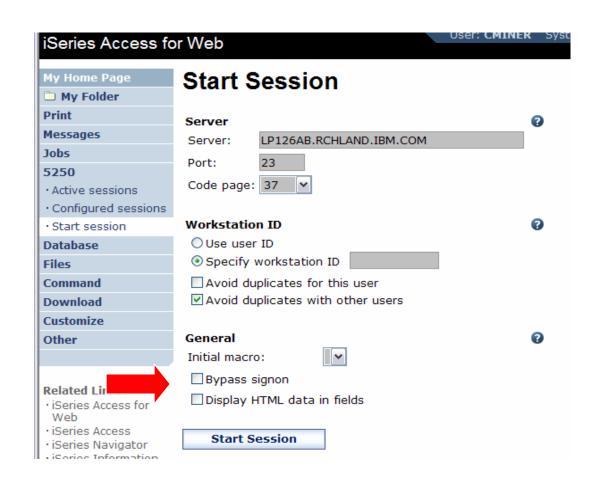
- Previously, iSeries Access for Web used only HTTP basic authentication to retrieve the user-ID and password from the user.
 - —Since this profile information could not be shared with other iSeries webbased applications, this often resulted in the user being prompted multiple times from different applications 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 (i.e., 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 i5/OS

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 signon feature cannot be used if iSeries Access for Web is configured to use application server authentication.)

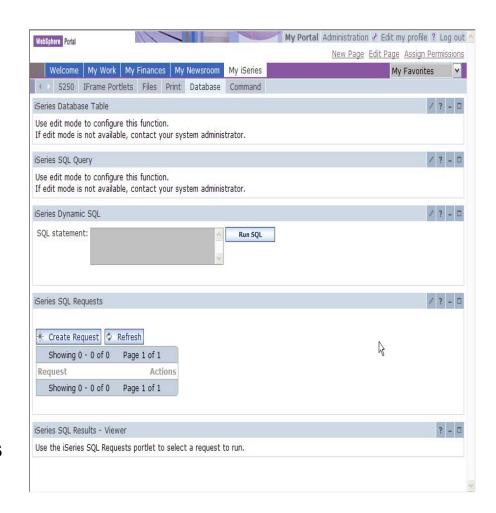


Enhancements to the Portlet version

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.

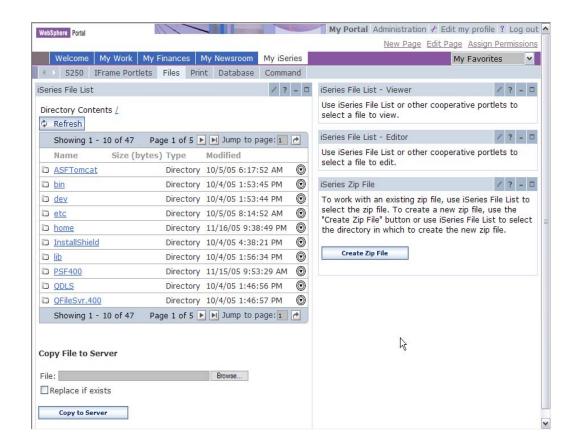


Enhancements to the Portlet version - Files

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.

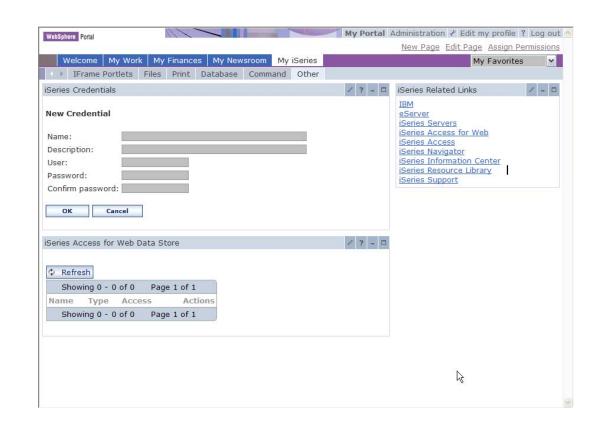


Enhancements to the Portlet version

Portlet version

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

iSeries Access for Web has many entry points

Can enter at many different pages

Can use navigation bar to move from function to function

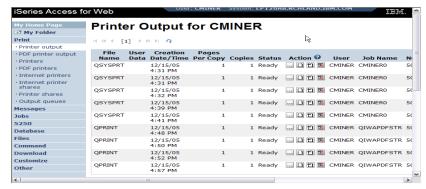
http://<myiseries>/webaccess/iWA5250



http://<myiseries>/webaccess/iWAMain



http://<myiseries>/webaccess/iWASpool



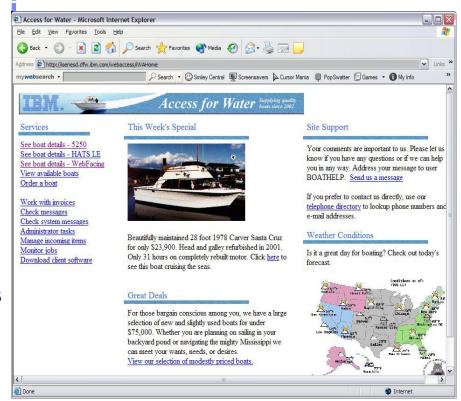
Your Window to your System

http://<myiseries>/webaccess/iWAHome

Customized 'window' to i5/OS

Home page is associated with i5/OS user profiles

- An administrator can create multiple different 'windows' based on user profile / group profile for different types of users.
- Can tightly control what functions a user can perform on your iSeries
- Tie in with other web applications (such as WebFacing and HATS) from here as well
- Link to other systems, not just System i



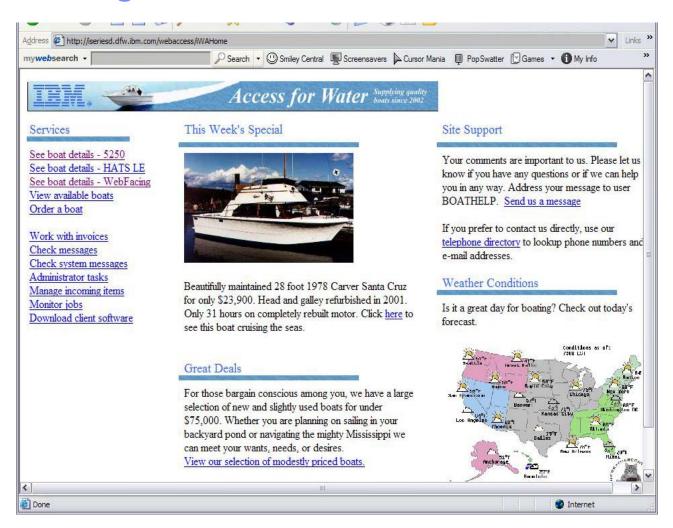
 One view and set of functions for the Accounting department

Another view and set of functions for the Warehouse staff

Customized Home Page

Customized view of the Home Page

 Could be used as 'entry' point to System i



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

Try out iSeries Access for Web for yourself!

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

П	ser		= 1	M	Δ	CI		21	
u	361	ı	_	v v	_	u	u		

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 HATS 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: LLHIRSCH@us.ibm.com to reset the user profiles on the system if either one gets disabled.

Please submit requirements through FITS

Best way to get new function into our products!



Functional enhancements can be submitted via the FITS system.

Go to the iSeries Access home page:

http://www.ibm.com/systems/i/software/access/

And click on link Request for Design Change

Summary

The way to work with your System i 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

As one customer said 'a definite "got to have" product for any serious System i shop'





Opera, Firefox...)

Appendix

Transform Examples:

- 1) Install with only ODBC driver and PC5250
- 2) Install with only PC5250 predefined workstation file

Example 2

Administrator wants to provide 5250 Emulator predefined workstation file for another group of users

Create a transform that allows rolling out a predefined PC5250 workstation file (.ws)

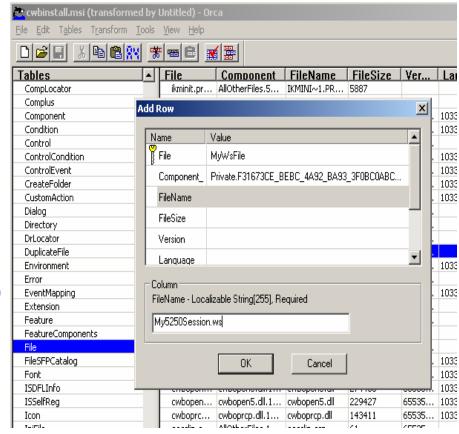
The .ws file must be created previously with the Start or Configure Session option of PC5250.

The file will be installed to the default store location for .ws files : <iSeries Access for Windows install path>\Emulator\Private

Process overview:

- 1. Specify new file's attributes in the File table.
- 2. Associate the new file to the Private component in the File table (Private is an existing component that installs files to the Private folder).
- 3. Add the file to the installation disk description, in the Media table.
- 4. Copy the .ws file to the install image.
- 5. Create the transform.

- Open cwbinstall.msi and select Transform>New Transform
- Open the File table.
- 3. Right-click on the right pane and select Add Row.
- 4. Enter the following values:
 - File = MyWsFile
 - Component = Private.F31673CE_BEBC_4A92_BA93_3F0 BC0ABC296
 - FileName = My5250Session.ws
 - FileSize = 622
 - Version = <leave it blank>
 - Language = <leave it blank>
 - Attributes = 8192
 - Sequence = 5000



Values in *red and italics* are your choice.

- 5. Open the Media table and add a new row with the following values:
 - Diskld = 22
 - LastSequence = 5000
 - DiskPrompt = 1
 - Cabinet = <leave it blank>
 - VolumeLabel = DISK1
 - Source = <leave it blank>
- 6. Save the transform as rollout_ws.mst.
- 7. In your source installation directory, recreate the Private directory tree. For example, suppose that your installation image is located in C:\MyImage. Create the following directory structure:

C:\MyImage\Program Files\IBM\Client Access\Emulator\Private

8. Copy the .ws file to your source image under the directory created on step 7.

Apply the transform

Two ways to apply the transform:

1. Your users can apply it at the command line:

Type:

setup /vTRANSFORMS=rollout_ws.mst



or

- 2. Modify setup.ini so users get the transform by just launching setup.exe:
 - a. Open setup.ini and locate the line saying CmdLine, under the [Startup] section.
 - b. Append the string TRANSFORMS= rollout ws.mst to CmdLine.

```
setup.ini - Notepad

File Edit Format View Help

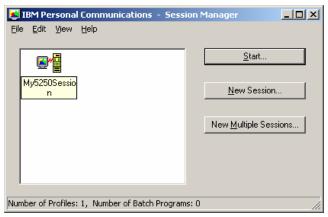
[Info]
Name=INTL
Version=1.00.000
DiskSpace=8000 ; DiskSpace requirement in KB

[Startup]
CmdLine=/l* "%temp%\xelinstlogmsi.txt"
SuppresswrongOS=Y
ScriptDriven=0
ScriptVer=1.0.0.1
DotNetOptionalInstallIfSilent=N
OnUpgrade=1
RequireExactLangMatch=0404,0804
```

Use Complete or PC5250 User Install option

- On the iSeries Access for Windows Install Wizard select 'Complete' setup or 'PC5250User' setup.
- The .ws file will be installed to the Emulator\Private folder.
- When users launch 'Start or Configure Session', the preconfigured .ws file will be listed.





Trademarks and Disclaimers

© IBM Corporation 1994-2006. All rights reserved.

References in this document to IBM products or services do not imply that IBM intends to make them available in every country.

The following terms are trademarks of International Business Machines Corporation in the United States, other countries, or both:

AS/400 e-business on demand OS/400
AS/400e IBM @Server
eServer IBM (logo) System i5

I5/OS System i

Rational is a trademark of International Business Machines Corporation and Rational Software Corporation in the United States, other countries, or both.

Java and all Java-based trademarks are trademarks of Sun Microsystems, Inc. in the United States, other countries, or both.

Microsoft, Windows, Windows NT, and the Wilderies logo are trademarks of Microsoft Corporation in the United States, other countries, or both.

Intel, Intel Inside (logos), MMX and Pentium are trademarks of Intel Corporation in the United States, other countries, or both.

UNIX is a registered trademark of The Open Group in the United States and other countries.

SET and the SET Logo are trademarks owned by SET Secure Electronic Transaction LLC.

Other company, product or service names may be trademarks or service marks of others.

Information is provided "AS IS" without warranty of any kind.

All customer examples described are presented as illustrations of how those customers have used IBM products and the results they may have achieved. Actual environmental costs and performance characteristics may vary by customer.

Information concerning non-IBM products was obtained from a supplier of these products, published announcement material, or other publicly available sources and does not constitute an endorsement of such products by IBM. Sources for non-IBM list prices and performance numbers are taken from publicly available information, including vendor announcements and vendor worldwide homepages. IBM has not tested these products and cannot confirm the accuracy of performance, capability, or any other claims related to non-IBM products. Questions on the capability of non-IBM products should be addressed to the supplier of those products.

All statements regarding IBM future direction and intent are subject to change or withdrawal without notice, and represent goals and objectives only. Contact your local IBM office or IBM authorized reseller for the full text of the specific Statement of Direction.

Some information addresses anticipated future capabilities. Such information is not intended as a definitive statement of a commitment to specific levels of performance, function or delivery schedules with respect to any future products. Such commitments are only made in IBM product announcements. The information is presented here to communicate IBM's current investment and development activities as a good faith effort to help with our customers' future planning.

Performance is based on measurements and projections using standard IBM benchmarks in a controlled environment. The actual throughput or performance that any user will experience will vary depending upon considerations such as the amount of multiprogramming in the user's job stream, the I/O configuration, the storage configuration, and the workload processed. Therefore, no assurance can be given that an individual user will achieve throughput or performance improvements equivalent to the ratios stated here.

Photographs shown are of engineering prototypes. Changes may be incorporated in production models.