



Session: 420017 / 21CS

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iSeries Access for Windows: What's New in V5R3?

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Topics to be covered

- Packaging
- Middleware
- Data Transfer
- PC5250
- Install
- Application Administration
- Security



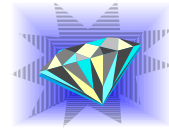
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Integrating native Windows with iSeries

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 to operate and administer iSeries systems and database
 - Operations Console to work with OS/400 system console
 - EZ-Setup to quickly and easily set up new iSeries servers



You have the most comprehensive iSeries native Windows connectivity solution in the market

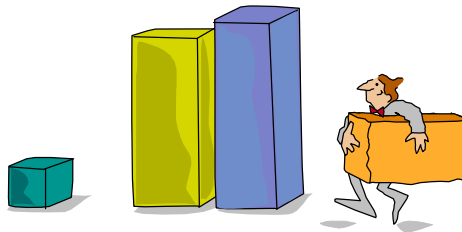
80+% of iSeries customers already using iSeries Access for Windows

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Packaging & Ordering



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iSeries Access for Windows - Product Information

iSeries Access for Windows

- 1st Release
 - May 1999, VRM = V4R4M0
 - End of Support 5/31/2001
- 2nd Release
 - August 2000, VRM = V4R5M0
 - End of Support 12/31/2002
- 3rd Release
 - May 2001, VRM = V5R1M0
 - End of Support ~~5/31/2003~~ 9/30/2005*
- 4th Release
 - August 2002, VRM = V5R2M0
 - End of Support ~~9/30/2004~~ 9/30/2005*
- 5th Release
 - 2004, VRM = V5R3M0



Welcome to iSeries Access for

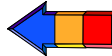
[What is iSeries Access for Windows?](#)

[Using iSeries Access for Windows](#)

[What's New in V5R3?](#)

[Sources of Information](#)

Show this Welcome when I restart my computer





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iSeries Access Family - Packaging

 V5R3 5722-XW1 iSeries Access Family	 V5R2 5722-XW1 iSeries Access Family	V5R1 5722-XW1 Client Access Family
iSeries Access for Windows, 5722-XE1, V5R3	iSeries Access for Windows, 5722-XE1, V5R2	AS/400 Client Access Express for Windows, 5722-XE1, V5R
iSeries Access for Web, 5722-XH2, V5R3	iSeries Access for Web, 5722-XH2, V5R	iSeries Access for Web, 5722-XH1, V5R1
	WebSphere Host Publisher, 5724-B81, V4.0, 5724-B81, V4.01	WebSphere Host Publisher, 5648-E25, V3.5, 5724-B81, V4.01
HATS Limited Edition V5.0, 5724-F97-01	HATS Limited Edition V4.0 5724-D34-01 (after 6/30/2003)	HATS Limited Edition V4.0, 5724-D34-01 (after 6/30/2003)
iSeries Access for Linux, 5722-XL1, V5R3		Customers with Software Subscription can get V5R2 clients by ordering no-charge Feature No. 2645 of Product No. 5722-XW1
	After 6/30/2003, current V5R2 customers can get version of Host Publisher that runs on WAS V5 and HATS LE by ordering no-charge Feature No. 2646 of Product No. 5722-XW1	After 6/30/2003, current V5R1 customers can get version of Host Publisher that runs on WAS V5 and HATS LE by ordering no-charge Feature No. 2646 of Product No. 5722-XW1

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Set up the License Key Information

iSeries Access Family (5722-XW1) is included on the Keyed Stamped media.

- Can use all functions of iSeries Access Family for 70 days without purchasing 5722-XW1.

To set up License key information for 5722-XW1

- Run WRKLCINF command.
 - Type '1' in the entry field next to the product 5722XW1 Option 1, Feature 5101.
 - **This is where you enter your software license key.**
- On the Add License Key Information (ADDLICKEY) display
 - Type the required information and add the license key information
 - Always enter the value *NOMAX regardless of what was entered for usage limit.



Notes: Software License Keys

With V5R1, iSeries Client Access Family (Licensed Program number 5722-XW1) is added to the Keyed Stamped Media to enable you to evaluate the function. This feature is for evaluation use only and keys are not supplied. The Client Access functions that require the Client Access Family license can be evaluated for 70 days. After 70 days, you need to order (or have upgraded to) the V5R1 5722-XW1 product to receive the software license key. As in prior releases, all components of Client Access Express can be installed on the PC, whether the components require a license or not. Also as in prior releases, the 5722-XW1 license will be checked at the point when a user tries to use a licensed function. The difference for V5R1 is that now users will be allowed 70 days to evaluate the licensed functions without having the license key.

The 5722-XW1 licensed program now has both a base and option 1.
Both need to be installed when XW1 is installed on the iSeries or AS/400e server.
5722-XW1 feature 5050, which is the base. This is where you need to enter your usage limit.

If you ordered a user-based option you would need to enter a use quantity equal to the number of users you are entitled to use.
If you ordered the PBOTC option, you would enter a use quantity of *NOMAX."

5722-XW1 feature 5101, which is option 1. This is where you enter your software license key.

The screens for ADDLICKEY have a 'usage limit' value (for release-to-release compatibility) and they cannot be left with the default of '0'. Thus our instructions recommend that you enter a value of *NOMAX. This field is ignored by Client Access license management as it checks the usage limit value entered on the base.



PC Hardware Requirements

Connection Options

Windows Operating Systems



- The V5R3 version of iSeries Access for Windows will not install on:
 - Windows 95
 - Windows 98
 - Windows ME
- The V5R3 version of iSeries Access for Windows can be installed on:
 - Windows NT 4.0
 - Windows 2000
 - Windows XP Professional
 - Windows 2003 Server

- The V5R2 version of iSeries Access for Windows can be used on Windows 98, ME, NT 4.0, 2000, XP, **2003**
- The V5R1 version of iSeries Access for Windows can be used on Windows **95**, 98, and ME, NT 4.0, 2000, XP



Hardware/Software requirements...

Operating system	iSeries Access for Windows	iSeries Navigator
Windows NT 4.0	<ul style="list-style-type: none"> Pentium 100 MHz and at least 32 MB Microsoft Windows NT Service Pack 6a Microsoft Internet Explorer 5.01 or later 	<ul style="list-style-type: none"> Pentium 850 MHz minimum and at least 256 MB, 512 MB recommended Microsoft Windows NT Service Pack 6a Microsoft Internet Explorer 5.01 or later
Windows 2000	<ul style="list-style-type: none"> Pentium 133 MHz and at least 64 MB Pentium 850 MHz minimum and at least 256 MB, 512 MB recommended 	<ul style="list-style-type: none"> Pentium 850 MHz minimum and at least 256 MB, 512 MB recommended
Windows XP	<ul style="list-style-type: none"> Pentium 233 MHz and at least 128 MB 	<ul style="list-style-type: none"> Pentium 850 MHz and at least 256 MB, 512 MB recommended
Windows Server 2003	<ul style="list-style-type: none"> 32-bit PC Pentium 133 MHz and at least 128 MB Pentium 64-bit PC Pentium 733 MHz and at least 192 MB <p>Microsoft Windows Server 2003 comes in several editions. The hardware requirements vary by edition. See Microsoft's Web site for base requirements information for all editions.</p>	<ul style="list-style-type: none"> Pentium 850 MHz and at least 256 MB, 512 MB recommended

Note: If you do not plan to use iSeries Navigator for anything other than managing your iSeries connections (adding, removing, and changing connection properties), it is recommended that you do not install the iSeries Navigator base component. Installing that component will result in higher memory usage when managing your iSeries connections.

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Hardware/Software requirements...

Other PC requirements	Value
Disk Space - Install	<ul style="list-style-type: none"> Typical - 148 MB (approximately) PC5250 User - 39 MB (approximately) Full - 221 MB (approximately) Custom - varies, depending on components installed
Adapter Card	A communications adapter card that supports TCP/IP.

Notes

- The Disk Space - Install values are approximate. For the exact values, see PC requirements (www.ibm.com/eservers/iseries/access/pcreq.html)
- You need 5 MB available on the drive where the Windows operating system is installed to accommodate temporary files that the iSeries Access for Windows setup program creates.
- Additional files are downloaded from the iSeries server when you use the File Systems function of iSeries Navigator.
- Service packs require additional space.
- The size for a Full installation could be different depending on whether SSL and plug-ins are in the installation search path.

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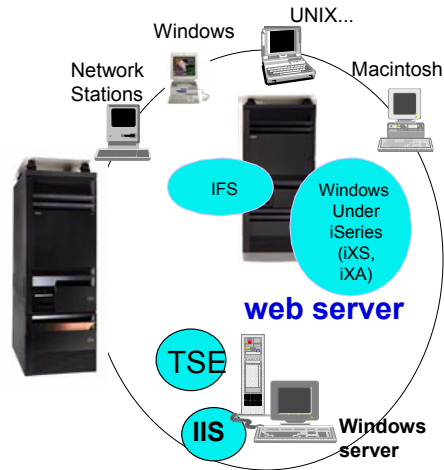
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Supports Microsoft operating environments...

- 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)



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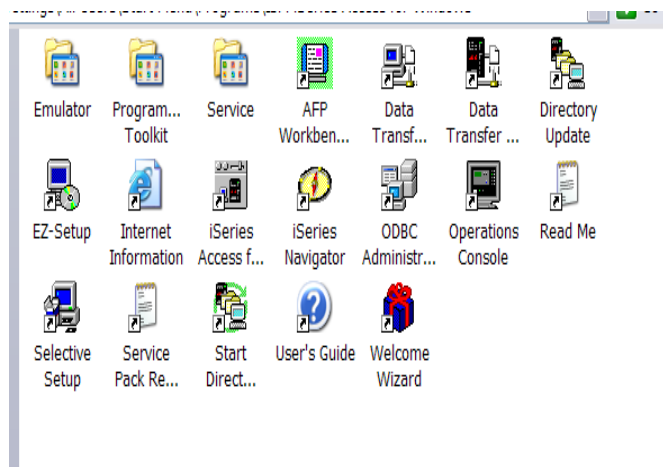
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Getting Started...

- Many new functions available from iSeries Access for Windows icon group...



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iSeries Access for Programmers Application Enablement

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iSeries Access Middleware

Middleware	Where it fits	Value to iSeries
<ul style="list-style-type: none"> iSeries ODBC driver 	<ul style="list-style-type: none"> Industry-standard Windows database access method. Supports Microsoft V3.0 specification. 	<ul style="list-style-type: none"> Access to DB2 UDB for iSeries
<ul style="list-style-type: none"> iSeries OLE DB provider (driver) Visual Basic Wizards 	<ul style="list-style-type: none"> Microsoft's universal data access standard interface for Windows applications working with relational and non-relational data. Supports OLE DB 2.5 Can use ADO 2.2 and 2.5 Can use VB 6.0 	<ul style="list-style-type: none"> Access to DB2 UDB for iSeries Can use OS/400 Data queues, Remote Commands, Stored Procedures, Distributed Program Calls... VB Wizards can be used with AS/400 OLE DB provider
<ul style="list-style-type: none"> .NET Data provider called IBM.Data.DB2.iSeries 	<ul style="list-style-type: none"> Microsoft .NET Framework is a platform for building, deploying, and running Web Services and applications 	<ul style="list-style-type: none"> Enables applications using Microsoft's .NET framework to access DB2 UDB for iSeries databases
<ul style="list-style-type: none"> Data Queues Remote Commands Stored Procedures Distributed Program Calls SQL APIs Data Transfer APIs 	<ul style="list-style-type: none"> Active X Automation Controls & Objects Industry-standard Windows programming interface 	<ul style="list-style-type: none"> Works with OS/400 Data queues, Remote Commands, Stored Procedures, Distributed Program Calls... Access to DB2 UDB for iSeries
<ul style="list-style-type: none"> PC5250 enablers 	<ul style="list-style-type: none"> Includes ActiveX controls Industry-standard EHLLAPI, WinHLLAPI, DDE for code conversion. 	<ul style="list-style-type: none"> For 5250 applications ENPTUI for enhanced 5250 datastream functions

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Notes: Middleware

iSeries ODBC Driver

ODBC is a Microsoft-defined standard database access interface for Windows users. Client Access provides an iSeries ODBC driver to enable any ODBC 32-bit Windows application (written to MS V3.0 specification) to transparently access DB2/400 information. iSeries ODBC driver supports Dynamic SQL access at static SQL speed (4x improvement), Block Fetch, Insert, Update, & Delete functions, takes advantage of DB2/400 Optimizer, supports Stored Procedures (result sets from stored procedures), SQL Collections do not need to be defined

iSeries OLE DB Provider (driver)

OLE DB is a Microsoft 32-bit Windows architecture for universal data access. OLE DB is defined as a multi-platform access method for relational and non-relational data, and is a superset of ODBC. Client Access includes an iSeries OLE DB Provider so that any PC application written to this interface can be used to access iSeries resources. The iSeries OLE DB Provider can be used for record level access, SQL calls, stored procedures, data queues, programs, and CL commands. The OLE DB and ActiveX toolkit which provides Visual Basic wizards and other sample programs is provided as part of the Client Access Toolkit.

ActiveX Automation Objects

ActiveX automation objects are provided for Client Access data queues, remote commands, and distributed program calls. Many popular client languages, such as Visual Basic, Delphi, PowerBuilder, and Visual C++, support ActiveX automation objects, and now these programs can use the Express client key components to develop client/server applications between the PC and the iSeries. Online help (including example code) is provided and can be accessed from object browsers.

iSeries Toolbox for Java

The iSeries Toolbox for Java includes a series of low-level APIs for accessing AS/400 data and resources from a Java program. It also includes a set of GUI classes to present iSeries data to the user from a Java program. The GUI classes use the Java Swing 1.0 (JFC 1.1) framework. This is a separately installable option of Client Access install. Once installed through Client Access, future updates to the Java Toolbox will be delivered to PC users through the Client Access 'service' function (ie, whenever a PTF for the Java Toolbox is applied to the iSeries Check Service Level recognizes the new level and downloads the fix to the client).

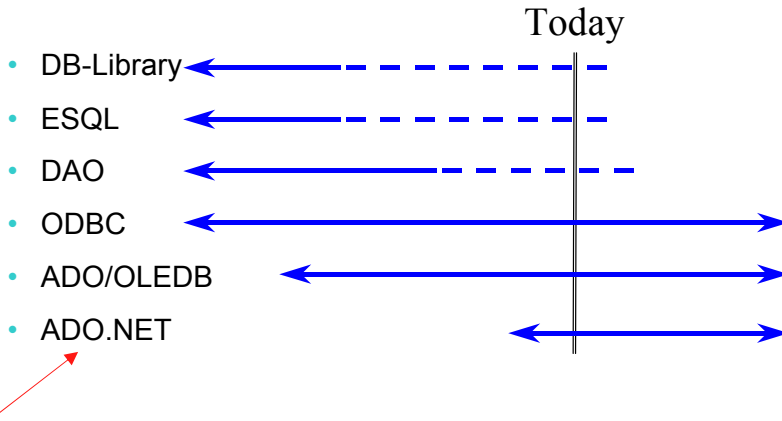
PC5250 Enablers

- EHLAPI support is provided so programmers can add a graphical interface to applications written to a 5250 interface to perform functions such as host data access, screen scraping and host automation. This industry-standard 32-bit support also enables applications currently written to another emulation products' EHLAPI to migrate and run unchanged using PC5250.
- WinHLLAPI support is implemented so customers who have WOSA-compliant applications can migrate to PC5250.
- PC5250 DDE now includes code conversion support. This provides a more consistent set of DDE APIs thus making it easier to migrate applications across different platforms.
- Enhanced Non-Programmable Terminal User Interface (ENPTUI) provides 5250 datastream functions such as ability to show radio buttons and check boxes on end-user desktops that can support these functions (such as a PC versus a 5250 terminal).
- PC5250 ActiveX Controls have been added and can be used in any application that supports ActiveX controls (such as Visual Basic, C++, etc). These controls enable host applications to use a list box or button.



.NET is the next big wave in Microsoft technology...

Microsoft Technology Roadmap





Notes: What is Microsoft .NET

Microsoft .NET is software that connects information, people, systems, and devices. It spans clients, servers, and developer tools, and consists of:

- The .NET Framework 1.1, used for building and running all kinds of software, including Web-based applications, smart client applications, and XML Web services—components that facilitate integration by sharing data and functionality over a network through standard, platform-independent protocols such as XML (Extensible Markup Language), SOAP, and HTTP.
- Developer tools, such as Microsoft Visual Studio® .NET 2003 which provides an integrated development environment (IDE) for maximizing developer productivity with the .NET Framework.
- A set of servers, including Microsoft Windows® Server 2003, Microsoft SQL Server™, and Microsoft BizTalk® Server, that integrates, runs, operates, and manages Web services and Web-based applications.
- Client software, such as Windows XP, Windows CE, and Microsoft Office XP, that helps developers deliver a deep and compelling user experience across a family of devices and existing products.

The .NET Framework is an integral Windows component for building and running the next generation of software applications and Web services. The .NET Framework:

- Supports over 20 different programming languages.
- Manages much of the plumbing involved in developing software, enabling developers to focus on the core business logic code.
- Makes it easier than ever before to build, deploy, and administer secure, robust, and high-performing applications.
- The .NET Framework is composed of the common language runtime and a unified set of class libraries.

Common Language Runtime

- The common language runtime (CLR) is responsible for run-time services such as language integration, security enforcement, and memory, process, and thread management. In addition, the CLR has a role at development time when features such as life-cycle management, strong type naming, cross-language exception handling, and dynamic binding reduce the amount of code that a developer must write to turn business logic into a reusable component.

Class Libraries

- Base classes provide standard functionality such as input/output, string manipulation, security management, network communications, thread management, text management, and user interface design features.

The ADO.NET classes enable developers to interact with data accessed in the form of XML through the OLE DB, ODBC, Oracle, and SQL Server interfaces. XML classes enable XML manipulation, searching, and translations. The ASP.NET classes support the development of Web-based applications and Web services. The Windows Forms classes support the development of desktop-based smart client applications.

Together, the class libraries provide a common, consistent development interface across all languages supported by the .NET Framework.

Note: The .NET Compact Framework does not ship natively with the .NET Framework. Developers may access the .NET Compact Framework using Visual Studio .NET 2003.

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.NET Data Provider new in V5R3...

- ADO.NET Managed Provider
 - The new .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.

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.NET Provider

Supported

- SQL (INSERT, UPDATE, DELETE)
- Commitment Control
- Connection Pooling
- SQL naming
- Unicode
- Tracing
- Threads
- IASPs (multiple databases)
- Compression
- Limited stored procedure support

Not supported

- Large Objects (LOBs)
- System naming (/)
- Package support
- Data links
- User Defined Types
- Record Level Access
- CMD/PGM call
- Data Queues



Notes: Using ADO.NET

The IBM DB2 UDB for iSeries .NET Provider (which is also called the Managed Provider or the IBM.Data.DB2.iSeries data provider) is based on the ADO.NET architecture. ADO.NET is a set of classes that uses .NET technologies to allow access to database servers. The IBM.Data.DB2.iSeries data provider supports the full set of ADO.NET classes to allow your application to access and use data that is stored in your iSeries DB2 database.

The IBM.Data.DB2.iSeries data provider is compiled for .NET and runs under the .NET Common Language Runtime (CLR) function and, therefore, follows established .NET provider and class definitions.

According to ADO.NET rules, managed providers do not define traditional external data structures or header files so your iSeries Access for Windows Managed Provider does not have a header file or unique data structures.

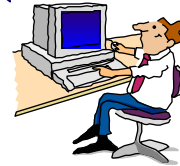
ADO.NET data providers do not offer as many classes or interfaces as traditional data providers and the properties for these classes are always a single word with no intervening spaces. This means that you can get and set IBM.Data.DB2.iSeries data provider properties by simply calling to methods supported by the various classes.

iSeries ODBC Driver



ODBC

Most popular database access method from a Windows application



Compliant with Microsoft ODBC Version 3 specification

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

ODBC (Open Database Connectivity)...

V5R3 enhancements

- 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



ODBC (Open Database Connectivity)...

V5R2 enhancements

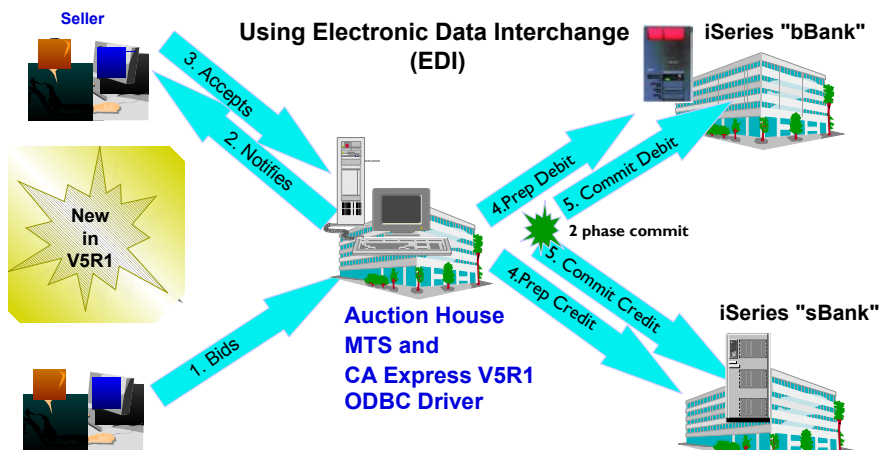
- MTS support
- Working with iSeries Database
 - Supports ROW-ID
 - 64K SQL Statements
 - additional descriptor information

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Microsoft Transaction Services (MTS)...V5R2



- This scenario assumes that the Auction House would handle the transaction

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Notes: What is ODBC MTS Support?

What is MTS?

- Microsoft Transaction Server (MTS) is a feature of the Microsoft Windows NT and 2000 Server O/S for development and deployment of three-tiered, server-centric applications built using COM technologies. MTS offers automatic transaction support, role-based security, access to other databases (including connection pooling), message queuing products and mainframe-based applications.

What is in Express V4R4/5 ODBC for MTS?

- Connection Pooling, which provides improved performance, is already available as the Microsoft ODBC driver manager handles it (ie, the Express ODBC driver doesn't do anything different or special). The user can turn connection pooling on and off via the ODBC Administrator's 'Connection Pooling' tab. This displays a list of the installed drivers, click on one to set whether connection pooling will be enabled or not and set the time-out value for unused connections.
- The Express ODBC driver was made 'Thread Safe' via V4R4 Service Pack SF59557. See Information APAR I11851 for information on thread safety.

What is in Express V5R1 ODBC for MTS?

- OS/400 V5R1 UDB/400 supports the X/Open XA standard for transaction coordination that the ODBC driver uses to provide two phase commit. ODBC driver will accept the commands and send them to the iSeries via a new set of database host server functions.
- ODBC driver support the SQLSetConnectAttr(SQL_ATTR_ENLIST_IN_DTC) statement
- The user can turn connection pooling on and off via the ODBC Administrator's 'Connection Pooling' tab. This displays a list of the installed drivers, click on one to set whether connection pooling will be enabled or not and set the time-out value for unused connections.
- ODBC driver is thread safe (see Information APAR I11851 which describes thread safety and documents that since V4R4 Service Pack SF59557, our driver is thread safe).

MTS Requirements and Restrictions

- MTS 2.0 (Windows NT with Option Pack 4.0 or Windows 2000) installed in the second tier machine. Distributed Transaction Coordinator (DTC) is included.
- Client Access Express V5R1 with ODBC installed in the same machine.
- OS/400 V5R1 for two phase commit.
- V5R1 MTS support is restricted to one transaction per connection at a time.



iSeries OLE DB Provider



ODE DB

Microsoft-recommended
Access for 32-bit Windows
applications

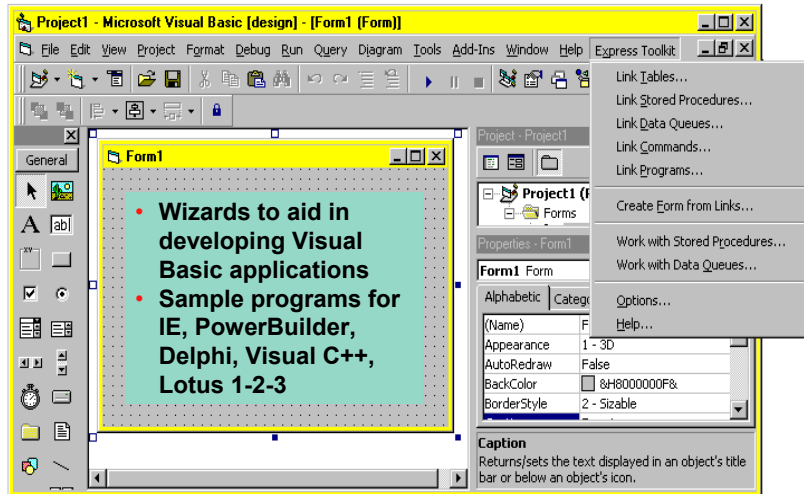
- Record level access
- Data Queues
- Stored Procedures
- SQL
- Remote Commands
- ODBC.



plus add-ins for Visual Basic

OLE DB Provider supports OLE DB 2.5

Visual Basic Programming Aides



OLE DB (Object Linking and Embedding)...

V5R3 Enhancements:

- 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
- DB2 UDB for iSeries support:
 - Database BINARY and VARBINARY data types
 - Database larger decimal precision support
- Unicode support
 - UTF-8 and UTF-16 support



OLE DB (Object Linking and Embedding)...

OLE DB provider work with Windows products, such as:

- ADO 2.1 - this ships with Microsoft IE 5.0 and Office/2000 products
- ADO 2.5 - this ships with Microsoft Windows 2000
- Visual Basic 6.0 OLE DB controls and wizards
- An OLE DB interface is provided to support ADO recordset Seek (ADO 2.x)
- 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
- Is thread safe

V5R2 enhancements...

- Working with iSeries Database
 - Supports ROW-ID
 - 64K SQL Statements
 - Additional descriptor information

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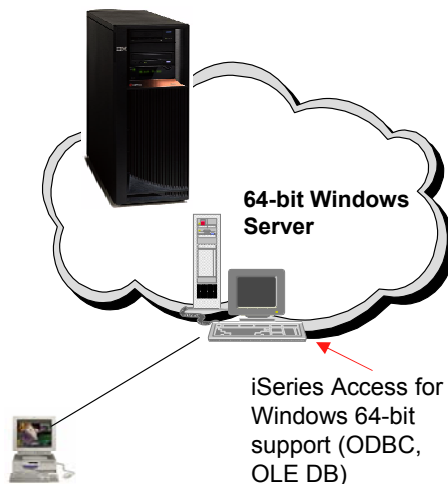
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64-bit Windows - ODBC, OLE DB...

Intel Itanium hardware

- The ODBC and OLE DB components have been ported to run natively on 64-bit Windows
 - Most other components will run in 32-bit mode on 64-bit hardware (print drivers and SSL support will not run with 64-bit applications).



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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

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iSeries Access for Windows



- 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

Incoming Remote Command enhancements in V5R3...

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 context**

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 the 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.



Firewalls and Windows XP Service Pack 2

- By default, once Windows XP SP2 is installed, the Windows Firewall is automatically configured to prevent some incoming connections into the PC. This can affect the following iSeries Access for Windows functions:
 - Incoming Remote Commands
 - Operations Console
 - Management Central
- If you are using these functions, and they stop working once Windows XP SP2 is installed, here are steps you can take ...



Incoming Remote Command

- This uses port 512 by default
- Typical error messages would be:
 - CPE3447 "A remote host did not respond within the timeout period"
 - rexec:connect:Connection timed out
 - rexec: can't establish connection
- Solution:
 - Configure a port exception to allow incoming TCP connections on port 512:

```
C:\> netsh firewall add portopening TCP 512 "rexecd server (exec service, port 512)"
```
 - OR -
Configure an application exception to allow the iSeries Access for Windows Remote Command service (cwbrxd.exe) to accept any incoming connection, regardless of port number or protocol:

```
C:\> netsh firewall add allowedprogram %windir%\cwbrxd.exe "iSeries Access Incoming Remote Command server"
```



Operations Console

- Use ports 67 and 2112 for local (async and LAN) connections
- Can use any one of a number of different ports for RCS -> LCS connections
- Typical failures are:
 - When connecting an LCS (local connection), the status may not progress beyond "connecting console".
 - When connecting an RCS (remote connection) to an LCS that has not had all needed firewall exceptions configured, it may fail to connect; or it may connect, but fail to authenticate. The failure reason noted at the RCS may be that the local system is not configured to receive calls.



Operations Console Continued

- Steps to correct:
- Configure a port exception to allow incoming UDP connections on port 67:
 - `C:\> netsh firewall add portopening UDP 67 "bootp server (bootps service, port 67)"`
- Configure a port exception to allow incoming TCP connections on port 2112 from the local PC (127.0.0.1) only:
 - `C:\> netsh firewall add portopening TCP 2112 "Internal Op Console worker server (port 2112)" ENABLE CUSTOM 127.0.0.1`
- Configure an application exception to allow the Operations Console program to accept any incoming connection, regardless of port number or protocol:
 - `C:\> netsh firewall add allowedprogram <INSTALL>\cwbocon.exe "iSeries Access Operations Console (cwbocon)"`



Management Central

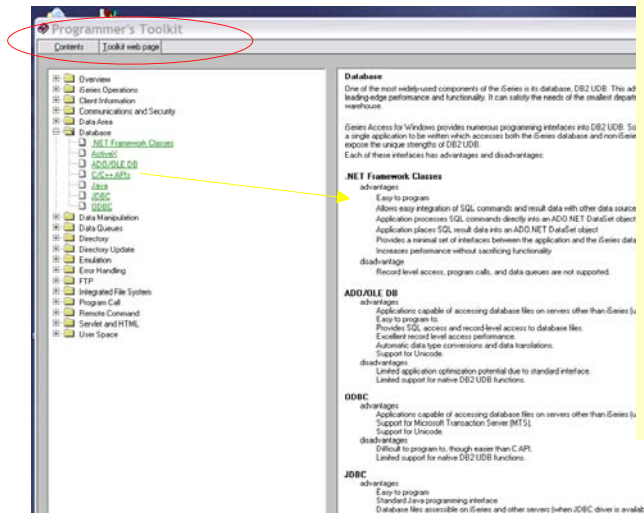
- Refer to:
- For V5R3:
<http://publib.boulder.ibm.com/infocenter/series/v5r3/ic2924/info/experience/mcfirewall.pdf>
- For V5R2:
<http://publib.boulder.ibm.com/series/v5r2/ic2924/info/experience/mcfirewall.pdf>



Info on Web

- The preceding information on Windows XP SP2 is also available on the web at:
 - <http://www-1.ibm.com/servers/eserver/series/access/supportedos.htm>
 - Then click on the appropriate link in the Windows XP Professional section

iSeries Access Toolkit



- Installable option of Access for Windows
- Included in the icon group for Access for Windows
- Contains sample programs, and documentation
- Also contains links to header files and Windows Help files installed on your PC
- Has Internet links to more sample programs, documentation, and other helpful information

Programmers Toolkit enhancements - V5R2

Data Transfer ActiveX Automation support

- The database transfer automation objects provide a programming interface for the Data Transfer functionality.

Visual Basic wizards

- Data types (BigInt, Large Objects (LOBs))
- Set cursor type and lock type properties
- Generate recordset seek code for tables record level access

Tools for Java

- Two new Java tools, GUI Builder and Resource Script Converter, are included in Express.
 - The **GUI Builder** is a visual editor for creating Java dialogs, property sheets and wizards.
 - The **Resource Script Converter** converts Windows user interface elements into a form usable by Java programs. These tools are an optionally installable component of the Toolkit, and require the current JRE and Java Toolbox.



Data Transfer

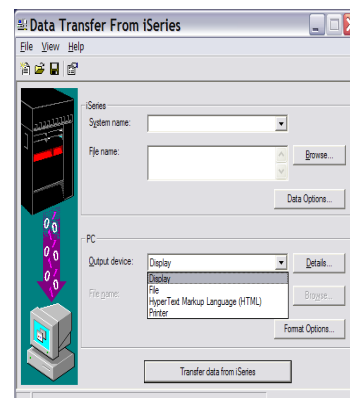
What is Data Transfer?

Provides an SQL-like interface

- To allow full file SELECT or customized queries including joins, sorting, and record grouping

Provides access to iSeries file members
Data Transfer has an easy-to-use GUI so users can:

- Download selected DB2 UDB for iSeries information to a
 - PC file
 - HTML file
 - PC display
 - PC printer
- Upload PC data to DB2 UDB for iSeries
 - From PC file



Many Other Ways to Run Data Transfer...

Batch Transfers

- RTOPCB and RFROMPCB
- Can also run multiple batch requests can run on a single connection

Can be placed in start-up file

Can be started from

- PC5250 Toolbar
- Express icon group
- Desktop objects or Explorer
- Create new ones from Windows New menu

Pre-defined Transfer Request

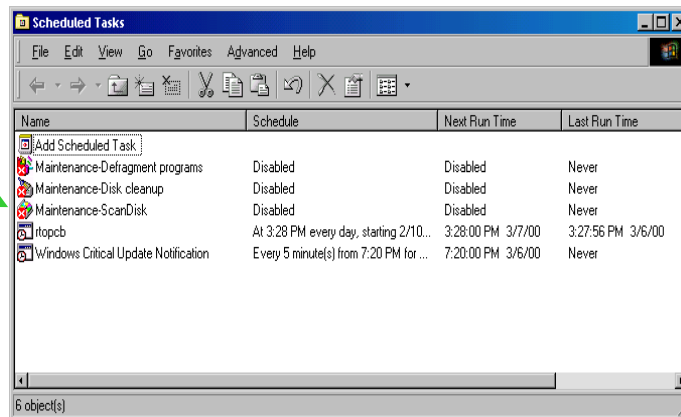
Auto-run without user intervention

Compatible with previous formats (ie, Enh.Win3.1, RUMBA)

Automating Data Transfer

You could schedule Batch Transfers using a Windows Scheduler

RTOPCB is scheduled to run at a given date and time





Notes: Scheduling a Data Transfer Request

Client AccessExpress does not provide a scheduler program. For an example of how to schedule a Data Transfer request, we picked Microsoft's System Agent application.

From Microsoft Task Scheduler select *Add Scheduled Task*. Go through the wizard to create the scheduled task and enter

"C:\Program Files\IBM\Client Access\RTOPCB.EXE" your.TTO

for the task to execute.

Complete the other scheduling options offered by the System Agent application. You are now ready to run transfer requests on a scheduled basis.



Data Transfer Provides Data Conversions

Capable of transferring data to and from many popular PC file types including

- ASCII Text
- CSV
- Excel and Lotus spreadsheet types
- Tab-Delimited Text
- UTF-8 & -16 (used by browsers)

ActiveX Automation support for all Data Transfer GUIs -

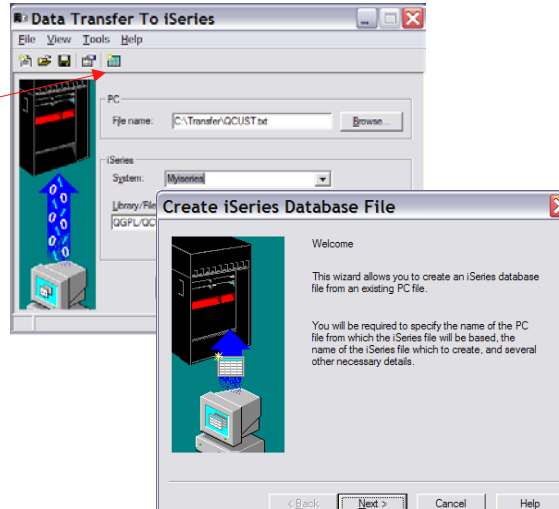
- ActiveX automation objects for transferring database data to and from iSeries and AS/400e servers.
- These objects provide both a high-level and a low-level interface.
- These objects can be used from Visual Basic and other languages which support ActiveX automation.

Create iSeries Database File Wizard

To help you create new tables in DB2 UDB for iSeries, use the **Database File Wizard**

- It also creates the File Description File (FDF) required for uploading the data to a new file

Start the Create iSeries Database File tool by selecting it from the Tools menu or by clicking on its icon in the toolbar



Data Transfer and Excel integration...

Data Transfer has add-ins for Excel users:

- Can download from DB2 UDB for iSeries directly into spreadsheet
 - Can create request
 - Can run previously saved request
- Upload PC data to DB2 UDB for iSeries directly from spreadsheet
 - Added in V5R2

The screenshot shows the Microsoft Excel interface with a table of data. A yellow arrow points to the 'Data Transfer' icon in the Excel toolbar. The table has columns labeled A through L and rows numbered 1 through 15. The data includes names, addresses, and various numerical values.

	A	B	C	D	E	F	G	H	I	J	K	L
1	CUSNUM	LSTNAM	INIT	STREET	CITY	STATE	ZIPCOD	CDTLMT	CHGCOD	BALDUE	CDTDUE	
2	938472	Henning	G K	4859 Elm	Dallas	TX	75217	5000	3	37	0	
3	839283	Jones	B D	21B NW 1	Clay	NY	13041	400	1	100	0	
4	392859	Vine	S S	PO Box 75	Broton	VT	5046	700	1	439	0	
5	938485	Johnson	J A	3 Alpine W	Helen	GA	30545	9999	2	3987.5	33.5	
6	397267	Tyron	W E	13 Myrtle	Hector	NY	14841	1000	1	0	0	
7	389572	Stevens	K L	208 Snow	Demer	CO	80226	400	1	58.75	1.5	
8	846283	Alison	J S	787 Lake	Etelle	MN	56342	5000	3	10	0	
9	475938	Doe	J W	59 Archer	Sutter	CA	95685	700	2	250	100	
10	693829	Thomas	A N	3 Dove Cir	Casper	WY	82609	9999	2	0	0	
11	593029	Williams	E D	485 SE 2	Dallas	TX	75218	200	1	25	0	
12	192837	Lee	F L	5963 Oak	Hector	NY	14841	700	2	489.5	0.5	
13	583990	Abraham	M T	392 Mill	Stiele	MN	56342	9999	3	500	0	
14												
15												



Notes: Create Database File Wizard

In Client Access Express, Data Transfer now has the ability to define and create a new AS/400 database file based on an existing PC data file. The new file is created as an SQL table. In previous releases, Data Transfer was only able to create files based on existing AS/400 database files. The new function will also create the FDF file required for uploading the data to the new file. The interface to create a new database file is found in the Data Transfer to AS/400 application. The function can be started from the Tools menu or a new toolbar icon.

The first step in creating a new AS/400 database file is to specify the PC file that you want the file based off of. The file can be in any of the following formats: ASCII text, BASIC Sequential, BIFF3, BIFF4, BIFF5, CSV, DIF, Tab-delimited text, or WK4. If you pick a file type containing detailed type information, such as BIFF or WK4, Data Transfer is able to more accurately determine the definition of the AS/400 file you will want to create to hold your data. After specifying your PC file, Data Transfer attempts to determine the type of the file. The type detected by Data Transfer is shown in the window. If this "guess" by Data Transfer is not correct, you will need to set the correct file type before you continue. If this is not done, Data Transfer will not be able to read the data file correctly, and an error will be displayed.

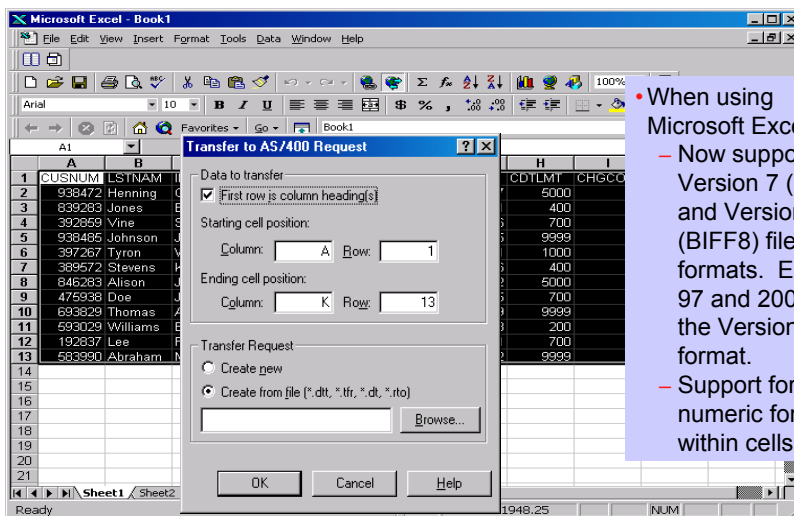
The information you enter along the way in the wizard will be loaded into the Data Transfer to AS/400 application upon completion of the wizard function. The FDF file is an essential item for step of transferring the data to the AS/400. This panel allows you to set the name of the FDF file to be used for the transfer. In order to retrieve the field information from the PC data file, Data Transfer must "scan" or parse the data. If you chose not to do this, you will be required to manually set up the field definitions from scratch. If you run the scan operation, Data Transfer will scan the PC file and come up with a first pass at what the field definitions of the new database file will need to be to hold the data from the PC data file. If you chose to have Data Transfer scan the PC data file, you will be presented with a list of fields found in the PC data file. If you chose a simple file type such as ASCII text, the field definitions will almost always need to be modified. If you chose a more complex file type such as BIFF or WK4, only minor modifications may be needed. Either way, it is a good idea to verify the field definitions are going to allow for all possible values you want to insert into the AS/400 database. A context menu (right click in Details list control) is available to allow users to add to or remove fields from the list.

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Enhancements for Excel users - V5R2



- When using Microsoft Excel
 - Now support Version 7 (BIFF7) and Version 8 (BIFF8) file formats. Excel 97 and 2000 use the Version 8 file format.
 - Support for numeric formulas within cells.

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Enhancements for Excel users - V5R3

- 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

	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	DATE	CUSNUM	LSTNAM	INIT	STREET	CITY	STATE	ZIPCOD	COTLMT	CHGCCOD	BALDUE	COTDUE		
2	1/4/2002	0	123456	DA	Algonquin	Roch	M	55901-1234	0	1	0	0		
3	2/4/2003	1	123456	DA	Algonquin	Roch	M	55901	1	1	2	0.5		
4	4/9/2002	2	123456	DA	Algonquin	Roch	M	55901	2	1	4	1		
5	5/4/02	3	123456	DA	Algonquin	Roch	M	55901-5678	3	1	6	1.5		
6	4/9/2002	4	123456	DA	Algonquin	Roch	M	55901	4	1	8	2		
7	10/30/2001	5	123456	DA	Algonquin	Roch	M	55901	5	1	10	2.5		
8	4/9/2002	6	123456	DA	Algonquin	Roch	M	55901	6	1	12	3		
9	11/9/2002	7	123456	DA	Algonquin	Roch	M	55901-7890	7	1	14	3.5		
10	12/30/2002	8	123456	DA	Algonquin	Roch	M	55901	8	1	16	4		
11	1/4/2002	9	123456	DA	Algonquin	Roch	M	55901	9	1	18	4.5		
12	2/4/2003	10	123456	DA	Algonquin	Roch	M	55901	10	1	20	5		
13	4/3/2002	11	123456	DA	Algonquin	Roch	M	55901	11	1	22	5.5		

Notes: Convert Excel data and time cells

Convert Excel date and time cells to iSeries date and time allows the transfer of standard Excel internal date and time formats to the iSeries without requiring conversion. Typically, date and time cells uploaded to the iSeries must be character strings. By enabling this option, Excel data can be converted to an iSeries compatible date or time without requiring prior conversion to a character string.

The following standard Microsoft Excel date and time formats are supported:

Format string	Example
m/d/yy	10/01/74
m/d/yyyy	10/01/1974
d-mmm-yy	01-Oct-74
d-mmm	01-Oct
mmm-yy	Oct-74
h:mm AM and PM	10:15 AM
h:mm:ss AM and PM	10:15:22 PM
h:mm	18:22
h:mm:ss	18:22:34
m/d/yy h:mm	10/01/74 6:20
mm:ss	18:25
[h]:mm:ss	18:25:32
mm:ss.0	25:23.0

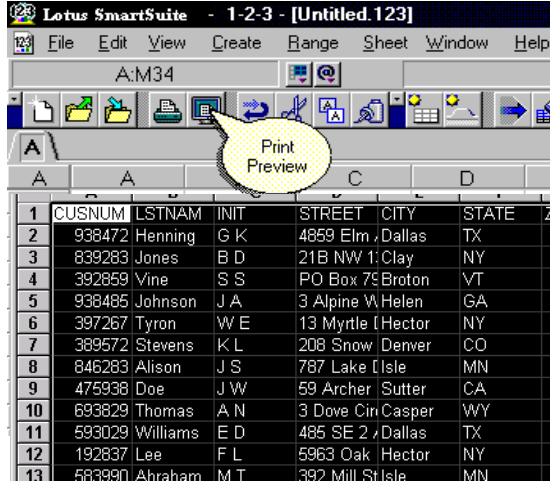
Convert numeric data in character columns to character data - allows the conversion of numeric cells in spreadsheet data to be converted to character. With this option disabled, numeric cells in character columns cause Data Transfer to end with an error message. By enabling this option, you can specify that numeric cells are converted to character on the upload to the iSeries to avoid Data Transfer ending when it encounters numeric data.

NOTE: Converted character strings are not verified by Data Transfer since the expected string cannot be determined. Data loss could occur during the conversion.

In the past, customers could not upload this data. Now they can by using this new option. For example, (notice the ZIPCODE column. ZIP+4 data is character and 5 digit ZIP codes are numeric.)



Data Transfer Enhancements for Lotus users - V5R2



- New in V5R1 version
 - Support 97 Edition (123)
 - When transferring a spreadsheet formula cell, Data Transfer now tries to determine the numeric value.
 - If the formula does not resolve to a numeric value it will continue to pass a value of 0
- New in V5R2 version
 - Support Lotus 123 Version 9 file format
 - With 65,536 rows (Version 97 support 8,192 rows)

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Notes: Enhancements for Excel and Lotus 1-2-3 users

Lotus 123 .123 file support added. The .123 file type is the standard type used in 97 Edition of Lotus 123. Lotus .WK4 support was added in release V4R4. The current .WK4 selectively installed option is expanded to include .123 support since these file types use the same LMBCS character conversion routines. The .123 support includes UNICODE character set support and support for new .123 numeric storage types. These types are defined in the Lotus .123 file format specification. Like .WK4 file support, .123 file format support includes the capability to read and write records to multiple sheets within a single workbook. Support for these types is also now included in the 'Create iSeries Database File' wizard.

Upload from Excel Add-In. Today, Data Transfer provides the ability to download information into an Excel spreadsheet. This function is integrated into the Excel by providing (1) an Excel add-in module called cwbtfxla.xll, (2) a toolbar icon/button the user can select to invoke a Client Access data transfer GUI, and (3) a menu option from the Excel "Data" pulldown menu called "Transfer Data From iSeries...". Data Transfer now extends its integration with Excel by providing an option to upload information from Excel to the AS/400. This additional integration include (1) an additional icon/button on the Client Access toolbar, (2) an additional menu option on the Excel "Data" pulldown menu called "Transfer Data To iSeries...", (3) a new dialog similar to the current download dialog, which allows the user to specify what data to upload and where to upload it to. A new DLL to be shipped and installed to provide this new capability.

Microsoft Excel BIFF7 and BIFF8 file support - support for the Microsoft Excel Versions 7 and 8 file formats. Version 7 support is simply an extension of the Version 5 file format which Data Transfer currently supports. The major change from Version 7 to Version 8 is that in Version 8 character data is stored as UNICODE. Like .WK4 file support, Excel Version 8 support includes the option to save to multiple sheets within a workbook. Support for these types also has been added to the Create iSeries Database File wizard.

Previously Data Transfer "ignored" formula cells and passed the default value of the field type to the iSeries. For example, a numeric formula cell found in Excel today would cause Data Transfer to pass a value of 0 to the iSeries database file. Data Transfer now determines if the formula is for a numeric value. If it is, Data Transfer pulls the result of the formula from the cell and passes it to the iSeries database file. If the formula does not resolve to a numeric value, Data Transfer will continue to pass the default value for the cell type.

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Data Transfer enhances e-business

CHAR	CHAR	DATALINK
name	address	website
IBM	Rochester	http://www.as400.ibm.com

HTML Tables	
Update an existing HTML file with new DB2/400 info	Can download iSeries database information directly into HTML tables Database information can be inserted directly into a section of an existing HTML file. A 'template' section is used to tell D/T where to put the resulting table in the HTML file. This enables users who have web pages of text/images update a section of database information yet leave the rest of the web page text intact. Previously the entire HTML file was replaced with a table containing the database data.
DATALINK data type support	OS/400 V4R4 added a DATALINK data type. This type supports url entries pointing at files accessible by your network. When transferring to an HTML table Data Transfer provides a link for this url

In V4R5

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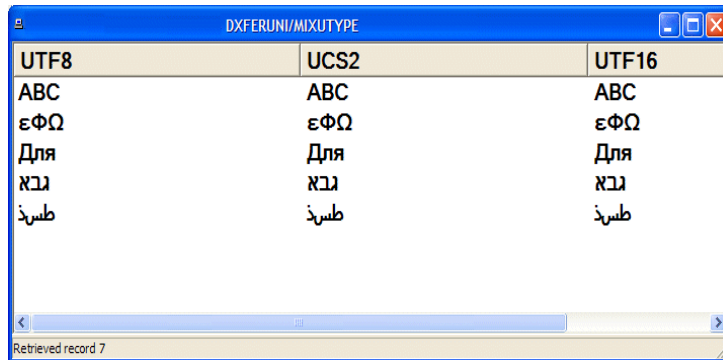
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Data Transfer - V5R3

Unicode enablement / New Unicode text file type

- Support for UTF-8 and UTF-16 data in DB2 database tables



Many different characters from many languages from a single character set

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Notes: Unicode data support

Unicode allows the use of many different characters from many languages from a single character set. In today's global economy this is extremely important. For example, a product description could be stored in the database in 10 different languages and used during product packaging for all these languages.

Here are some of the Unicode features added to Data Transfer in V5R3:

- True Unicode support in Microsoft Excel Version 8 files.
- A new Unicode text file format that allows you to store data in UTF-8, UTF-16, or Big-endian UTF-16.
- Unicode display support.
- Unicode print support including configurable fonts.
- Support fo UTF-8 and UTF-16 native DB2 column types



Other new V5R3 Data Transfer features...

- Unicode enablement / New Unicode text file type
- Support for larger decimal precision
- Support for BINARY and VARBINARY SQL data types
- Support for UTF-8 and UTF-16 data in DB2 database tables
- Support for standard date and time cells in Microsoft Excel
- Option to allow numeric to character conversion when transferring Microsoft Excel data to the server
- Support most recently used request list and last directory in Excel Add-in
- Support data compression for faster transfers



Other Data Transfer enhancements...

V5R2 enhancements

- Support for uploading more than 256 columns of data to a database file
- Support new iSeries database functions



PC5250 Display & Print Emulation



PC5250 V5.7 included in V5R3M0...

New in PC5250 V5.7:

- Accessibility enhancements to the operator information area (OIA): Popup keypad, and Color mapping as well as visual indication of sounds
- Enhanced mouse marking
- Bidirectional (LamAlef) enhancements
- USB Japanese 106 keyboard support
- Basic_ascii print PDF and PDT



Personal Communications
iSeries Access for Windows

WorkStation Program
Version 5.7 for Windows

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20031002



◆ *PC5250 V5.5 included in iSeries Access for Windows V5R2 version*

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Notes: PC5250 Emulation

PC5250 display emulation enables users to run AS/400 programs, work with OS/400 screens, and to send AS/400 output to PC printers. PC5250 display emulation supports up to 26 sessions to one or more AS/400 systems. To configure and start an emulator session:

- 1 Start the PC5250 configuration program.
- 2 Select Display for the session type.
- 3 Select the size for the session.

Note: Do not use End Connection *YES to log off your emulator session and disconnect from the AS/400. Instead, select COMMUNICATION from menu bar then select DISCONNECT.

PC5250 print emulation can be used to print AS/400 output on printers known to the AS/400 -- this could be a network printer or a PC-attached printer. Up to 26 printer sessions can be simultaneously running to one or more AS/400 systems.

To configure and start a printer emulation session

- 1 Start the configuration program.
- 2 Select Printer for the session type.
- 3 Click the Setup button to configure additional options for the printer session.

Help text is available if you need additional help with the options.

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PC5250 V5.5 (V5R2 enhancements)

Usability...

- Bypass signon can now be used in conjunction with Kerberos tickets to avoid a signon screen
- Wrap pasted text. Allows the paste of copied text across fields and lines without breaking in the middle of a word, or ending a line with an invalid word.
- Move +/- sign before the number when copying/pasting - for consistency with other Windows applications
- Improved error messages

National language support

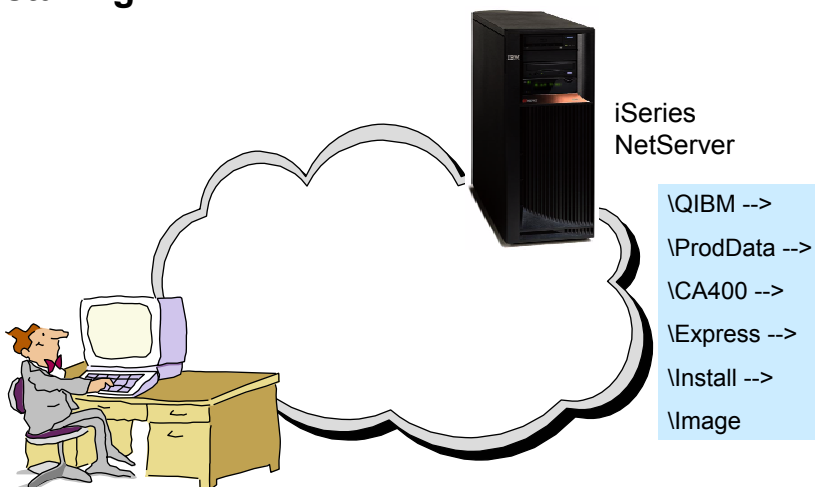
- Support has been added for Hindi and Japanese code page 1390/1399

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Installing



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iSeries Access for Windows installs code in iSeries IFS (NetServer)

- iSeries Access client Install Image placed in IFS in:
 - \QIBM\ProdData\CA400\Express\Install\Image
 - Already set up as 'shared'
- Service Pack placed in IFS in:
 - V5R1 - Service Pack PTFs saved in the main install image--no extra reboot!
 - For V4R5 or earlier, \QIBM\ProdData\CA400\Express\Service\Image
- Express installs and services other code placed in IFS:
 - iSeries Toolbox for Java, Java Runtime Environment, Secure Sockets Layer (SSL) Encryption programs, iSeries Navigator Plug-ins, Add-ins
 - V5R1 - EZ Setup
- Creating Customized Install CD images
 - SSL component can now be included in your customized install CD image (V5R2)



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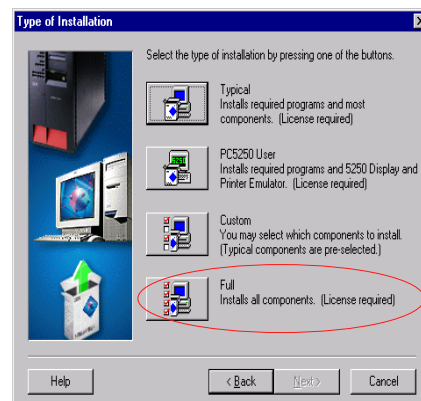
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Tip: Tailored Install

Do you want to control which iSeries Access for Windows components your users can install?

- Create a custom installation image by excluding the unwanted components from a master installation image.
- Use this customized installation image for installations across your network
- Users then could start iSeries Access for Windows install from file you have set up and simply select 'Full' install -- getting only what you have put in that file.



For information on tailored install images look at iSeries Information Center

- <http://publib.boulder.ibm.com/pubs/html/as400/infocenter.html>

Follow 'Access for Windows' patch, Installation and Service Administration -> Creating a tailored installation image

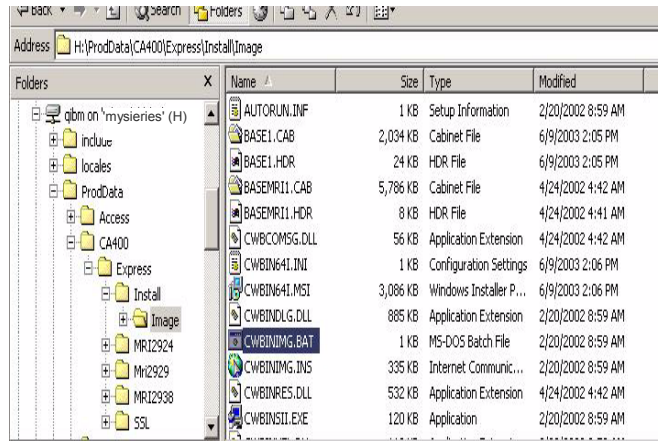
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Steps to set up your own 'Tailored' Install

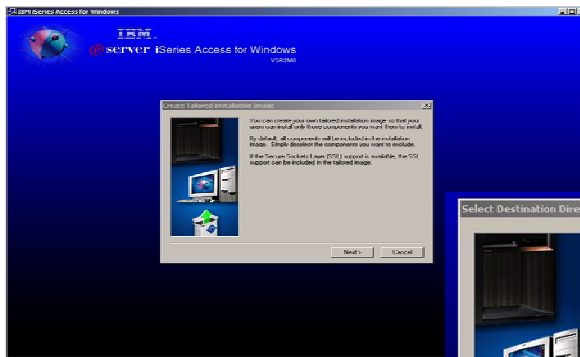
Use Tailored Install Wizard

- Stored in Client Access folder
 - QIBM->
 - ProdData->
 - CA400->
 - Express->
 - Install->
 - Image->
- Run Cwbinimg.bat program

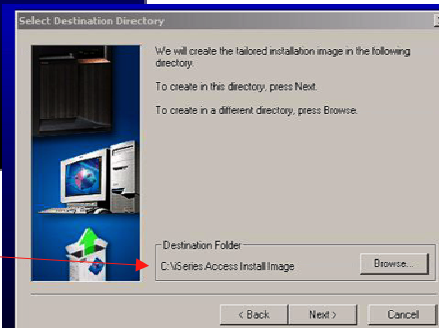


Run Wizard to create a Tailored Install Image

Run **Cwbinimg.bat** wizard

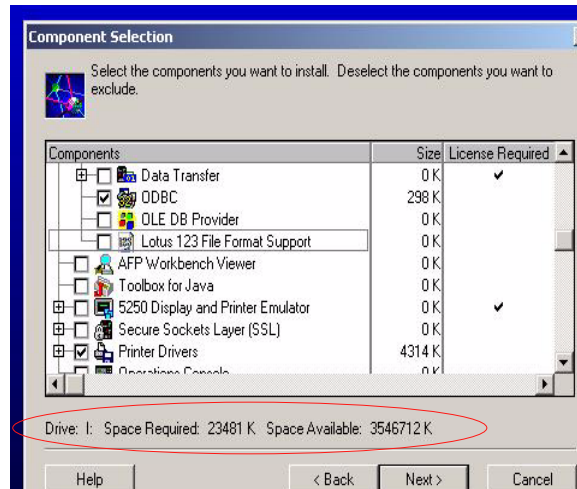


Select where you want this saved
 -- could be in iSeries IFS or PC server...



Example: Only want user to have ODBC and Printer drivers

- Build tailored install that only enables end user to use ODBC and Printer drivers
- Deselect all items you don't want users to use. Program will tell you if there is a pre-req you must install
- Note: this option requires **23MB** of space.



Notes: Tailored Install

After your initial installation and configuration, you can create tailored installation images containing only the components you specify. You can then easily distribute these installation images across your network with little user interaction using the silent installation/migration option. Additionally, you can restrict users' access to functions by selecting which components to include in an installation. Several common methods are:

- Creating a tailored installation image - you can create a custom installation image by excluding the unwanted components from a master installation image. You can then use the customized installation image for installations across your network.
- Installing or migrating silently - create a response file that contains a record of your responses to prompts during an installation. You can then use this response file to control duplicate installations that do not require any user interaction.

Creating a tailored installation image of iSeries Access for Windows

You may want to control which iSeries Access for Windows components your users can install. One way to do this is by excluding selected components from an installation image, and then distributing this tailored installation image to your users. The Tailored Installation Image wizard provides a simple interface for this function. You can start the tailored installation wizard from the iSeries Setup and Operations CD, or by navigating to the installation image directory, \QIBM\ProdData\CA400\Express\Instal\Image, and entering cwbinimg.

Note: If your iSeries server has multiple iSeries Access for Windows secondary languages, you can use any of the installed secondary languages, or the primary language on the iSeries server, as the primary language for the new installation image. This is not available if you are running the wizard from the CD, because the CD will not contain any secondary languages.

Distributing the installation image

The wizard allows you to specify where you want to create the tailored installation image. This location must be an empty directory, (you cannot overwrite a previous installation image) and must not be the root directory. Also, only complete installation images contain the program that creates tailored installation images. The wizard is not copied onto the user's PCs.

Servicing the installation image

Any tailored installation images are not updated when Program Temporary Fixes (PTFs) are applied to or removed from the iSeries server. You must re-create the installation image to get service pack updates. You can re-create your installation image quickly and with little user interaction by creating a response file and using it to silently re-create your tailored installation image with the service pack. See Installing Client Access Express silently for more information.

For information on tailored install images see: <http://publib.boulder.ibm.com/pubs/html/as400/infocenter.html>
Administering -> Installation and Service Administration -> Creating a tailored installation image

Servicing the Tailored Install Image

Problem

- When you create the Tailored Install, the Program Temporary Fixes (PTFs) in the QIBM directory are also applied to the newly created tailored image.
- However, this tailored installation image is not updated when future PTFs are applied to or removed from the iSeries server
- Because they are in a file unknown to OS/400

Solution

1. You can recreate the Tailored Install image by pointing back at QIBM, re-running Tailored Install, and storing on top of your old image.
2. Go to iSeries Access web site and download PTFFORM. This can be used to your Tailored Image.
 - Only updates to functions in your tailored image will be updated. Thus users will not be able to run Selective Install and get additional Access for Windows functions from that directory.

For information on Tailored Install images see:

- <http://publib.boulder.ibm.com/pubs/html/as400/infocenter.html>
- Find 'iSeries Access'. Then follow path of 'Administration', then 'Installing or migrating multiple PCs', to 'Tailored Install'

Use PTFFORM to add new Service Pack to Tailored Install image

PTFFORM only puts in fixes for code that is contained in image

The screenshot shows a web browser window with the URL <http://ftp.software.ibm.com/as400/products/clientaccess/win32/v5r2m0/servicepack/si08894/tailore>. A yellow callout '3' points to the download link. Another yellow callout '2' points to the address bar. A third yellow callout '1' points to a table of service packs.

iSeries Access for Windows (Client Access Services) (5722-ME1) Release Level	Latest Service Pack PTF #	Server Maintenance	Date PTF was Available	Installed File Date	Target for Next Service Pack
V5R2M0	SI08894	Refer to Server Notes	June 20, 2003	08/05/02	October 24, 2003
V5R1M0	SI08288	Refer to Server Notes	May 8, 2003	05/08/01	November 21, 2003

Problems downloading a Service Pack?

www.ibm.com/eserver/iseries/access



Notes: Adding future Service Packs to Tailored Imag

PTFFORM.EXE

PTFFORM is intended to update a copy of the original image or for a Tailored Image that you have created using cwbinimg.bat. When you download the Service Pack file from the web site and run it, it automatically expands into a temporary directory, asks you where the install image is that you'd like to update to the new service level, updates that image, then cleans up it's temporary directory. .

You should not use PTFFORM to the original image on your iSeries in QIBMProdData\Access\Windows\Install\Imag. It is better to obtain the official Service Pack PTF from Service or use a CumPkg; then update the original image using the LODPTF and APYPTF commands. LODPTF/APYPTF update the DSPPTF information on your iSeries that is used for fix management and service. If you use PTFFORM instead, it would work. But DSPPTF 5722XE1 on your iSeries will have no knowledge of your update and a future CumPkg could backlevel you..

Getting Service Pack PTFs

You can order a Service Pack CD from IBM. It will take a few days to receive this CD, and then you need to have someone in Operations put the CD in the iSeries optical drive.

A new feature in OS/400 V5R2 is that you can order a Service Pack CD electronically, and place it directly in the IFS in a Virtual Optical Device. You can then install from this Virtual Optical Device just like you would from the real iSeries Optical Device. Basically what you are doing is:

- Downloading a CD image containing your PTF and making the IFS look like a CD drive to install from.

To do this you must prearrange with IBM Service. Service will place the CD image in a special FTP directory for 48 hours (at most). You can then FTP the file to your iSeries. For more information, go to:

- <http://www-912.ibm.com/supporthome.nsf/document/27321011>



Also use normal procedures to install Service Pack on your iSeries

The screenshot shows a web browser window with the address <http://www-1.ibm.com/servers/eserver/iseries/access/casp.htm>. The page title is "iSeries Access Connection Information".

On the left side, there is a navigation menu with the following items: Information APARs (Support Statements), FAQs, Windows(R) Operating Systems (2000/Me/XP/etc), Technical Support, Articles, IBM Library, Express Toolkit, iSeries Information Center, and Related links: iSeries Navigator, Operations Console, iSeries ODBC Driver for Linux, Additional Links, Feedback, and How to buy.

The main content area has a blue header "Latest Service Packs for Supported Releases". Below it, there are three bullet points:

- To see service packs for every release, refer to [Service Pack History for All Releases](#).
- For problems downloading a service pack, [click here](#).
- For support information on iSeries Access and the Microsoft Windows operating systems, [click here](#). Operations Console users: [Known problems with Operations Console and Windows 2000 Service Pack 4](#)

Below the text is a table with the following data:

iSeries Access for Windows (Client Access Express) (5722-XE1) Release Level	Latest Service Pack PTF Number	Server Maintenance	Date PTF was Available	Installed File Date	Target for Next Service Pack
V5R2M0	SI08894	Refer to Server Notes	June 20, 2003	08/05/02	October 24, 2003
V5R1M0	SI08389	Refer to Server Notes	May 8, 2003	05/06/01	November 21, 2003

Below the table is a section titled "Problems downloading a Service Pack?". It says "Try one of these:" and lists:

- Review the Software Knowledge Base Article: [Problems Downloading Files from the FTP Site, including Client Access Service Packs](#).
- Order the PTF to install on your iSeries.
 - Use SNDPTFORD to order the PTF (product 5722XE1) and install it on your iSeries. Since the service pack PTFs generally exceed the size limit to be sent electronically, you can receive the PTF on media by changing the "Delivery Method" (DELIVERY) parameter on SNDPTFORD to "ANY". (The parameter defaults to "LINKONLY")
 - Use Internet PTF Delivery (IPTF). To find out about this service and the requirements, go to <http://www.ibm.com/eserver/iseries/support/> and from the left menu, select "Fixes".



New Feature for OS/400 V5R2 Users...

Use IFS as a Virtual Optical Device

- You can obtain a Service Pack CD electronically and place it directly in the IFS in a Virtual Optical Device (just like a real iSeries Optical Device)
- You can then download a CD image of the PTF and make your IFS look like a CD Drive
- You can install the PTF from this CD image thus eliminating the need to either use:
 - iPTF - will send you a CD because image is too big to download over Internet.
 - SNDPTFORD (Send PTF Order) - will send you a CD because image is too big to download over Internet

- Install the Operations Navigator plug-in
 - Required one time only if you choose to download using Operations Navigator
- Download the self-extracting .exe file
 - Run the .exe file and install the files in the default directory:
 - jvopnav\com\ibm\as400\opnav
- Consider using software managers called "download managers" to allow you to resume interrupted or failed downloads, such as:
 - GetRight®
 - Go!Zilla
 - Netzip
 - SmartDownload
- For more information, go to:
 - <http://www-912.ibm.com/supporthome.nsf/document/27321011>

This option of ordering the official Service Pack PTF may be a more attractive alternative than downloading the Service Pack PTF from the iSeries Access webpage

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Notes: Installing fixes from the FTP Server

Before installing fixes from the Download Server

Before you install the fixes in your package, do the following.

- Have a copy of the e-mail confirming your order available for reference.
- Install the Operations Navigator plug-in. (Required one time only if you choose to download using Operations Navigator)
- Download the self-extracting .exe file.
- Run the .exe file. You should install the files in the default directory: jvopnav\com\ibm\as400\opnav.

Consider using software managers called "download managers" to allow you to resume interrupted or failed downloads. Although IBM does not endorse any third-party download managers, some popular ones include the following.¹

- GetRight®
- Go!Zilla
- Netzip
- SmartDownload

Follow these steps to download the fixes

- Decide whether to download the fixes directly to IFS (Integrated File System) on the iSeries or to a PC.

With V5R2, you have two choices.

- You can use image catalogs, and download the fixes directly to IFS on the iSeries.
- Or, you can burn CD-ROMs on a PC.

Without V5R2, you must burn CD-ROMs on a PC.

Note: You will get better performance when burning the CD-ROMs if you put the files on your local PC drive.

Select one of the following three methods to download the fixes.

- Use the FTP command from OS/400
- Use a Web browser
- Use Operations Navigator
- To download the fixes, follow the instructions provided in your e-mail for whichever method you selected in the previous step.

Note: The time that it will take to download the fixes is dependent on many factors including the speed and the configuration of your network.

Follow these steps to install the fixes

- You may install the fixes using either method listed below.
- Install the fixes from an image catalog associated with a virtual optical device. (V5R2 required)
- Install the fixes from CD-ROM on any supported release.

Install the fixes from an image catalog

- Refer to the instructions on how to install fixes from an image catalog in the iSeries Information Center.
- Note: You must have release V5R2 installed in order to use image catalogs.

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Silent Install

Use Silent Install to:

- Eliminate the need for any user interaction during the installation process
- Allow you to quickly and easily copy duplicate installations across your network
- Restrict the set of initial components that an end user can install

Can be used for:

Initial Install

Upgrades

Service Packs

Migration from Windows 95/NT client (V3R2M0) to the Express client

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Notes: Using Silent Install

Silent installation eliminates the need for any user interaction during the iSeries Access for Windows setup process. A response file provides all installation information so that no dialog boxes display while installing iSeries Access for Windows. To perform a silent installation:

1. Create your response file.
2. Start the silent installation.
3. Check the log file return codes to see if your installation was successful.

Note: Silent migrations use a different procedure for creating the response file; otherwise, they may use the previous procedure. The response file contains the installation options that the system would normally prompt you for during the installation process.

To playback a silent installation, type the following at a command prompt in the iSeries Access for Windows installation image directory:

```
'setup -s -f1d:\dir\file.iss -f2d:\dir\file.log' where:  
-f1 is an optional parameter where you can specify the response file (file.iss) to use. If you do not use this parameter, then the installation attempts to use a default response file named setup.iss. It looks for this file in the directory containing setup.exe.  
d:\dir is the drive and directory that contains the response file that you want to use. If you use the -f1 parameter, then you must specify the drive and directory along with the response file name.  
-f2 is an optional parameter where you can specify the location and name for the log file that the silent installation creates. If you do not use this parameter, the installation creates a log file named setup.log and places it in the directory containing setup.exe. d:\dir is the drive and directory that contains the log file. If you use the -f2 parameter, then you must specify the drive and directory along with the log file name. file.log is the name of the log file that you want to create.
```

'Create a response file

A response file records the selections made in response to the prompts in the installation process.

During a silent installation, the setup program will use the response file to get the information necessary to complete the installation

Start the Silent Install

Silent install uses a response file (file.iss) for the responses to prompts during the installation process.

This eliminates the need for any user interaction during the installation process, and allows you to quickly and easily copy duplicate installations across your network.

Check the log file return codes to see if your installation was successful

Information about the status of the silent installation can be recorded in a log file (file.log).

A table is provided in the Online Administrators Guide that illustrates the differences between a normal and silent installation by comparing how the two types of installations handle various conditions that commonly arise during the installation process.

For detailed information on Silent Installs see:
<http://publib.boulder.ibm.com/pubs/html/as400/infocenter.html>
Administering -> Installation and Service Administration -> Silent installation

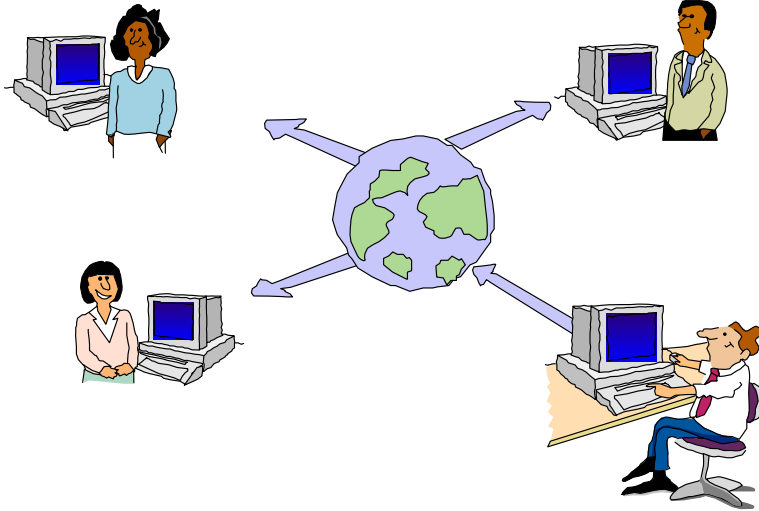
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Perform Install for your users



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Combine use of Tailored and Silent Install

- You wish your users to:
 - Have only selected parts of iSeries Access for Windows installed on their PC
 - And you don't want them to find additional Access for Windows functions in the Selective Install windows
 - Get it installed on their PCs without user intervention
 - Want updates (service packs) and new releases to automatically get installed on those end user PCs
- Use a combination of Tailored Install and Silent Install and a few PC commands (wizards) to do this
- From then on Access for Windows will keep desktop users up to date.
- Use new PTFFORM to update Tailored Install directory with fixes

Steps to perform...



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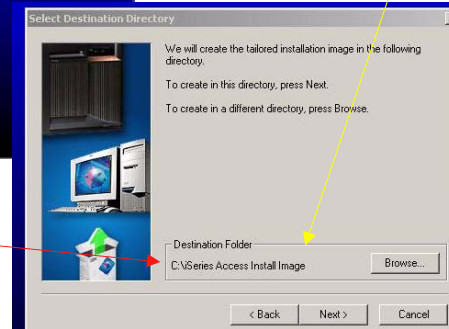
Step 1. Run Tailored Install Wizard



Run **Cwbinimg.bat** wizard

Have a drive mapped to \\myseries\myshare

Select where you want this saved
(if you put in QIBM directory you may automatically get SSL encryption program, iSeries Navigator plug-ins, add-in's)

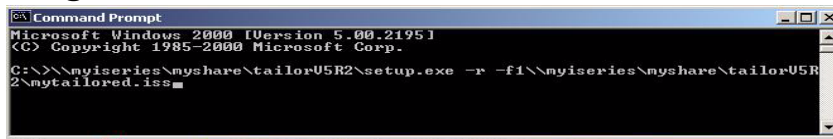


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Step 2. Record Silent Install of the Tailored Install Image



Set up to record a Silent Install Response File

Using 'universal naming convention' (UNC) rather than mapping a drive - so it can be found without a mapped drive

- Do not have any version of Client Access or iSeries Access (5763-XD1, 5722-XE1) on your PC
- Point to QIBM directory on your iSeries
- Point to location you want to store your response file (not in QIBM directory)
- Bring up a command prompt
- Key in Silent Install command
 - 'setup -r -f1d:\dir\file.iss' to identify where responses are to be stored
- This starts the iSeries Access Install program

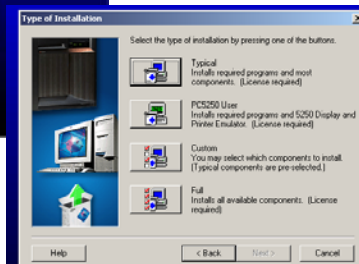
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Step 2 (continued). Recording the Tailored Install functions now...



- Now select 'Full' install to capture steps to install everything that is in the Tailored Install file



Note: during this step this image is also being installed on your PC. You probably want to uninstall it after completing this step.

Step 3. Schedule Silent Install for PC Desktop

Many Windows Scheduler Programs could be used...

```

Microsoft Windows [Version 5.00.2195]
(C) Copyright 1985-2000 Microsoft Corp.

C:\>help at
The AT command schedules commands and programs to run on a computer at
a specified time and date. The Schedule service must be running to use
the AT command.

AT [[\computername] [ /DELETE ] /DELETE [/YES]]
AT [[\computername] time [/INTERACTIVE]
  [ /EVERY:date[,...]] [ /NEXT:date[,...]] "command"

\computername Specifies a remote computer. Commands are scheduled on the
local computer if this parameter is omitted.
id Is an identification number assigned to a scheduled
command.
/delete Cancels a scheduled command. If id is omitted, all the
scheduled commands on the computer are canceled.
/yes Used with cancel all jobs command when no further
confirmation is desired.
time Specifies the time when command is to run.
/interactive Allows the job to interact with the desktop of the user
who is logged on at the time the job runs.
/EVERY:date[,...] Runs the command on each specified day(s) of the week or
month. If date is omitted, the current day of the month
is assumed.
/NEXT:date[,...] Runs the specified command on the next occurrence of the
day (for example, next Thursday). If date is omitted, the
current day of the month is assumed.
"command" Is the Windows NT command, or batch program to be run.
    
```

- Bring up Command prompt
- Use 'AT' command... or some other scheduler program/wizard

Step 3 (continued) Add this to 'AT' under the Command step

```

Command Prompt
Microsoft Windows 2000 [Version 5.00.2195]
(C) Copyright 1985-2000 Microsoft Corp.

C:\>\\myseries\myshare\tailorU5R2\setup.exe -s -f1\myseries\myshare\tailorU5R2\mytailored.iss
    
```

Schedule the Silent Install for end user's desktop

```

Command Prompt
Microsoft Windows 2000 [Version 5.00.2195]
(C) Copyright 1985-2000 Microsoft Corp.

C:\>help at
The AT command schedules commands and programs to run on a computer at a specified time and date. The Schedule service must be running to use the AT command.

AT [\\computername] [ /id ] [/DELETE] | /DELETE [/VER] |
  / /EVERY:date[,...] | /NEXT:date[,...] "command"

\\computername      Specifies a remote computer. Commands are scheduled on the
                    local computer if this parameter is omitted.
                    Is an identification number assigned to a scheduled
                    command.
/delete            Cancels a scheduled command. If id is omitted, all the
                    scheduled commands on the computer are canceled.
/yes              Head with cancel all jobs command when no further
                    confirmation is desired.
time              Specifies the time when command is to run.
                    Expressed as hours:minutes in 24-hour notation (00:00 [midnight]
                    through 23:59).
/interactive      Allows the job to interact with the desktop of the user
                    who is logged on at the time the job runs.
/EVERY:date[,...] Runs the command on each specified day(s) of the week or
                    month. If date is omitted, the current day of the month
                    is assumed.
/NEXT:date[,...]  Runs the specified command on the next occurrence of the
                    day (for example, next Thursday). If date is omitted, the
                    current day of the month is assumed.
"command"         Is the Windows NT command, or batch program to be run.
    
```

Notes: Schedule a command remotely

The 'at' command is part of Windows 2000 and can be used to schedule a task from a command prompt on a remote PC:

At

Lists scheduled commands or schedules commands and programs to run on a computer at a specified time and date.

The Schedule service must be running to use the at command.

- at [\\computername] [/id] [/delete] | /delete [/yes]
- at [\\computername] time [/interactive] [/every:date[,...] | /next:date[,...]] command

Parameters

- none
- Used without parameters, at lists scheduled commands.

Accessing Scheduled Tasks remotely

Network administrators can create task files for maintenance and add them to users' computers as needed; you can send and receive task files, as you would any other file, in e-mail messages; and you can share the Scheduled Tasks folder on your computer so that it can be accessed remotely by using My Network Places.

Note:

You create a scheduled task on your local computer and then drag the .job file over to a remote computer account.

Parameters

- \\computername - Specifies a remote computer. If this parameter is omitted, the commands are scheduled on the local computer.
- id - Specify the identification number assigned to a scheduled command.
- /delete - Cancels a scheduled command. If id is omitted, all the scheduled commands on the computer are canceled.
- /yes - Forces a yes answer to all queries from the system when deleting scheduled events.
- time - Specifies the time when the command is to run. Time is expressed as hours:minutes in 24-hour notation (00:00 [midnight] through 23:59).
- /interactive - Allows the job to interact with the desktop of the user who is logged on at the time the job runs.
- /every:date[,...] - Runs the command on every specified day or days of the week or month (for example, every Thursday, or the third day of every month). Specify date as one or more days of the week (M,T,W,Th,F,S,Su) or one or more days of the month (using numbers 1 through 31). Separate multiple date entries with commas. If date is omitted, the current day of the month is assumed.
- /next:date[,...] - Runs the specified command on the next occurrence of the day (for example, next Thursday). Specify date as one or more days of the week (M,T,W,Th,F,S,Su) or one or more days of the month (using numbers 1 through 31). Separate multiple date entries with commas. If date is omitted, the current day of the month is assumed.
- command - Specifies the Windows 2000 command, program (.exe or .com file), or batch program (.bat or .cmd file) to be run. When the command requires a path as an argument, use the absolute path, that is, the entire path beginning with the drive letter. If the command is on a remote computer, specify UNC notation for the server and share name, rather than a remote drive letter. If the command is not an executable (.exe) file, you must precede the command with cmd /c; for example: cmd /c dir > c:\test.out



Silent Install - V5R2 Enhancement

Install

- A task tray icon has been added at the end user desktop to let the user know that a Silent Install is occurring.
 - This should warn users not to shut off their PCs during this install, and they can use it to track the install progress.

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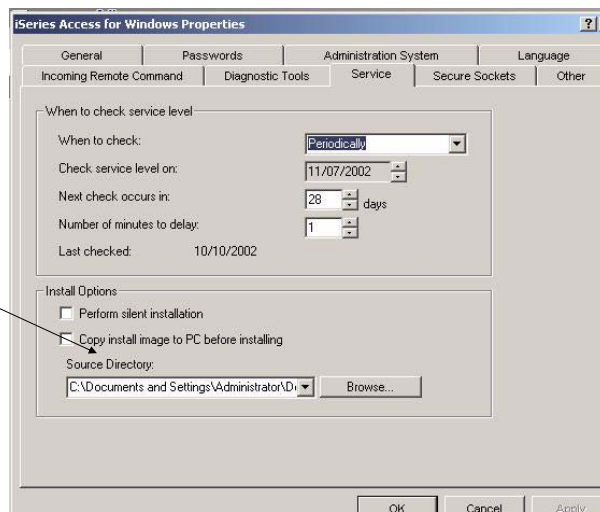


Results: Access for Windows Properties

iSeries Access for Windows code installed on PC user's system

Access for Windows Properties

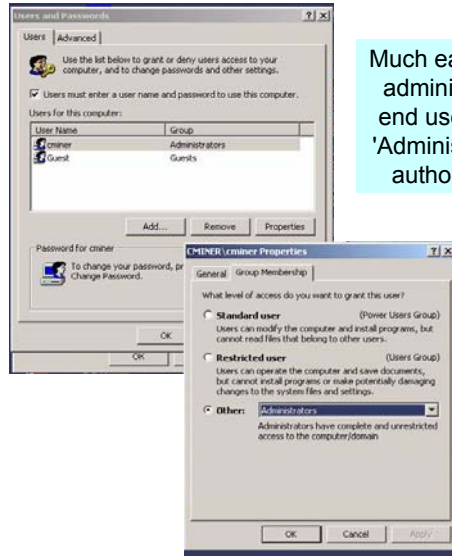
- Automatically set up to point at directory where code was installed from
- Default is that Access for Windows will check every 28 days for updated code in that location



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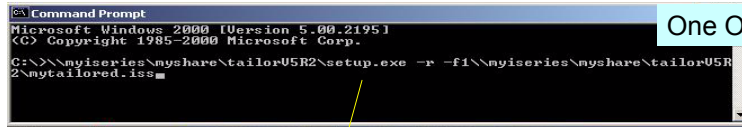
**Windows NT
Windows 2000
Windows XP
Windows 2003**



Much easier to administer if end user has 'Administrator' authority !!

- Administrators can set up these operating systems so no programs, fixes, etc can be installed on the desktop by the user
- Only the Administrator has complete and unrestricted access

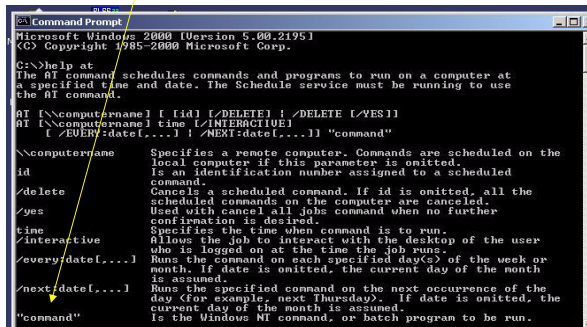
Administrator can 'push' update using the 'AT' command...



One Option...

- Update your Tailored Install Image (via PTFFORM) and then,
- Schedule updates for end user's desktop

Need Administrator's userid/password in here
--> Userid/password must be same on Windows as on iSeries



Notes: Administrator tasks

Issue: If the end user is not considered the 'administrator, then the administrator must sign onto the PC in order to install updates, etc

Solutions:

When the Administrator initially sets up the PC for the end user, the Administrator should set up an administrator's account on every PC. The userid/password of the administrator account on the PC needs to exist on the iSeries if the scheduled install is to work. If the administrator userid also exists on the iSeries, then the passwords must match (on PC and iSeries). If the password changes on either end, the launch of the install won't work, and the administrator password needs to be synched up. When an administrator password is changed, any scheduled task needs to be edited or deleted/recreated with the new administrator password associated with it. Note: The Windows Help text says that the administrator password never expires so you can get around the problem of resetting all the passwords, but if the Administrator the iSeries password, then the password must be changed for all the scheduled tasks at the same time.

Easiest might be to NOT have the PC administrator userid on the iSeries -- and instead use the NetServer Guest user profile to support any install requests made from the PC on the PC administrator account's behalf. Note: Please understand the ramifications and exercise caution when using the Guest user profile

Now the Administrator can 'schedule tasks' to run on the end user PC under the Administrator's userid/password.

- The Administrator could use some command like the DOS "AT" command:
 - Administrators can use the "AT" command (part of Windows O/S) to run remotely on the PC user desktop.
 - Administrator can create a scheduled task on HIS local PC to run setup.exe from this directory and drag it to the user's PC remotely.


```
setup.exe > image
```
- Administrator could schedule another task for CheckService on HIS local PC and copy it to the user's PC remotely. The scheduled job on the PC is going to run under an administrator account on the PC.

iSeries Access for Windows Properties, Service tab:

Under the Service tab:

- Set the entry "When to check" to 'Never' as the Administrator will be defining a scheduler task and not using the internal iSeries Access for Windows schedule.
- Then set up a Windows schedule entry to run as an administrator account: --> Open Control Panel --> Open 'Scheduled Tasks' --> Add Scheduled Task

For more information see: es/v5r2/ic2924/index.htm?info/rzah1/rzah1netguestprof.htm

Administrator can set up Access for Windows for Silent updates...

Another Option...

The image shows two screenshots from a Windows environment. The left screenshot is the 'iSeries Access for Windows Properties' dialog box, specifically the 'Service' tab. It shows settings for 'When to check service level' (Periodically, 11/07/2002, 28 days, 1 minute delay) and 'Install Options' (Perform silent installation checked). The right screenshot is the 'Check Service Level' dialog box, showing the 'Task' tab with the task name 'C:\WINNT\Tasks\Check Service Level job', the command 'C:\PROGRA~1\IBM\CLIENT-1\checkvsw.exe /CSDCHECK', and the user 'CMNER\cmner'. An arrow points from the text below to the 'Run as' field in the second dialog.

Need Administrator's userid/password in here
--> Userid/password must be same on Windows as on iSeries

Notes: Administrator tasks

Issue: If the end user is not considered the 'administrator, then the administrator must sign onto the PC in order to install updates, etc

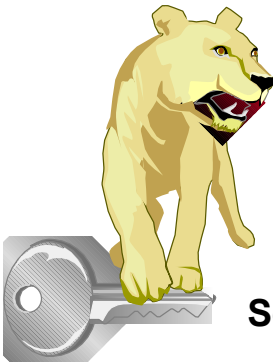
Use Access for Windows Silent Install Updates

Alternatively, the Administrator could set in the iSeries Access for Windows Properties to 'Perform silent installation'. If the administrator is intending a silent install, then the following should be set:

- The 'Source Directory' must contain the location of new service packs and/or releases.
 - Browse the Check Service Level program (C:\Program Files\IBM\Client Access\ cwbcckver.exe -- or if iSeries Access for Windows installed to a different directory, browse to there), and assign a name to this task (for instance "iSeries Access Check Service Level")
- Set 'Schedule Frequency' to how often you want the task to run

Enter the Administrator account information (user name and password) to run Check Service Level under that account

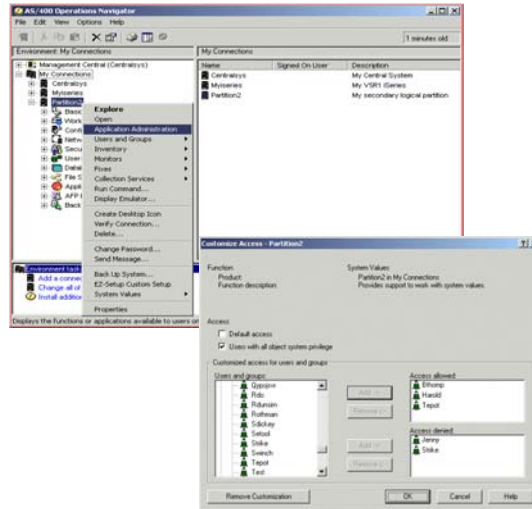
- Open Advanced Properties to add the SCHEDCHECK parameter to the 'Run' field (for example "C:\Program Files\IBM\Client Access\cwbcckver.exe" SCHEDCHECK
- Press OK to save the schedule entry - can view it later via 'Scheduled Tasks' in Control Panel



Security Considerations

Application Administration Overview

- Manage access to functions on a "per iSeries user" basis
- Administer iSeries Navigator, other Client, and Host applications
- Separate settings and access schemes for each iSeries in your network
- Ability to even restrict users with All Object privilege
- You can copy access settings from function to function for ease of administration



Notes: Application Administration

To Access Application Administration:

For an individual iSeries...

- Right Click on "Management Central (SystemX)" in iSeries Navigator
- Select Application Administration from the context menu

This will allow you to view and modify access settings for administrator functions in iSeries Navigator, other Client Applications, and Host applications. Selecting the "Applications" button from this dialog allows you to work with iSeries Navigator, other Client, and Host applications that can be restricted with Application Administration

For Administering functions specific to Management Central on your current Central System:

Right Click on "Management Central (SystemX)" in iSeries Navigator
Select Application Administration from the context menu

This will allow you to view and modify access settings only for administrator functions associated with Management Central on the current Central System. Selecting the "Applications" button from this dialog, only allows you to work with Management Central applications that can be restricted with Application Administration.

Registering Applications to be administered: Application Administration cannot be used to restrict access to an application's functions until the application has been registered on the iSeries. To register Applications, select the "Applications" button from the Application Administration dialog. Then select the applications you want to administer and click the "Add" button.

Default Access: The Application Administration dialog allows you to set up the default access scheme for iSeries Navigator and any other host or client applications which make use of Application Administration. You can explicitly give or take away access to the default user; you can also take away access to those users with "ALLOBJ (all object) privilege.

Individual Access: An individual user or group can then be given more or less access. This can be done by using the "Customize" button from the Application Administration dialog and selecting users and groups that should be specifically allowed or denied access to a function. To easily view and manage all of the access settings for an individual user or group, select the user's properties under "Users and Groups," push the "Capabilities" push button, and click on the "Applications" tab in the Capabilities dialog. This dialog also shows where the users access for each function comes from --the default access scheme, "ALLOBJ privilege, membership in a group that has explicit access, or explicit user access.

Note: You must have Security Administrator authority on the iSeries in order to change access settings in Application Administration, or to access the "Applications" dialog.



Application Administration - by system

Disk management is not available by default

Application Administration - myseries

Select the functions or applications available to users.

iSeries Navigator | Client Applications | Host Applications

Function	Default Access	All Object Access
AS/400 TCP/IP UTILITIES	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
BACKUP RECOVERY AND MEDIA SERVICES FR	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
DIGITAL CERTIFICATE MANAGER (DCM)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
*SYSTEM CERTIFICATE STORE	<input type="checkbox"/>	<input checked="" type="checkbox"/>
OBJECT SIGNING APPLICATIONS	<input type="checkbox"/>	<input checked="" type="checkbox"/>
OPERATING SYSTEM/400	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ALL OBJECT	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ACCESS JOB LOG OF *ALLOBJ JOB	<input type="checkbox"/>	<input checked="" type="checkbox"/>
SERVICE	<input type="checkbox"/>	<input checked="" type="checkbox"/>
CLUSTER MANAGEMENT	<input type="checkbox"/>	<input checked="" type="checkbox"/>
DISK UNITS	<input type="checkbox"/>	<input checked="" type="checkbox"/>
QIBM_QYLP_SERVICE_LPARGMGT	<input type="checkbox"/>	<input checked="" type="checkbox"/>
SERVICE TRACE	<input type="checkbox"/>	<input checked="" type="checkbox"/>
QIBM_EJB_PRODUCT	<input type="checkbox"/>	<input checked="" type="checkbox"/>
QIBM_EJB_GROUP_OF_FUNCS	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Remove Customization

Applications ... OK Cancel Help

Application Administration - myseries

Select the functions or applications available to users.

iSeries Navigator | Client Applications | Host Applications

Function

Richas1dd in My Connections

Basic Operations

Messages

Printer Output

Printers

Jobs

Work Management

Active Jobs

Server Jobs

Job Queues

Output Queues

Subsystems

Memory Pools

Configuration and Service

System Values

Remove Customization

Applications ... OK Cancel Help

- Host Applications
- iSeries Navigator

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Application Administration - by user

iSeries Access for Windows

All Application Administration information is stored on the iSeries server, and roams with users when they use iSeries Access for Windows on a different PC

Application Administration - Richas1dd

Select the functions or applications available to users.

iSeries Navigator | Client Applications | Host Applications

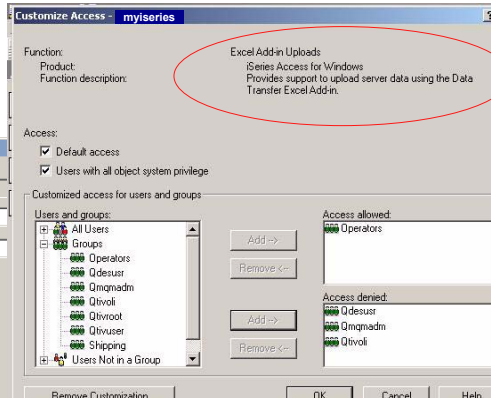
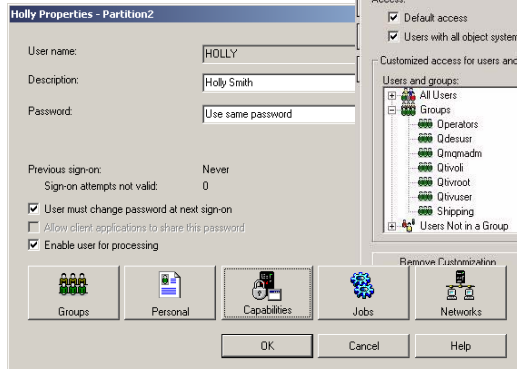
Function	Default Access	All Object Access	Customized Access
iSeries Access for Windows	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
5250 Display and Printer Emulator	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Data Transfer	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Download from server	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
GUI Downloads	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Use of RTDPCB	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Autostart Downloads	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Excel Add-in Downloads	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
ActiveX Automation Downloads	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Upload to server	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
ODBC Support	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
OLE DB Provider	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Remote Command - Command Line	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

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Application Administration - By User

Individual users and groups can be given more or less access capabilities

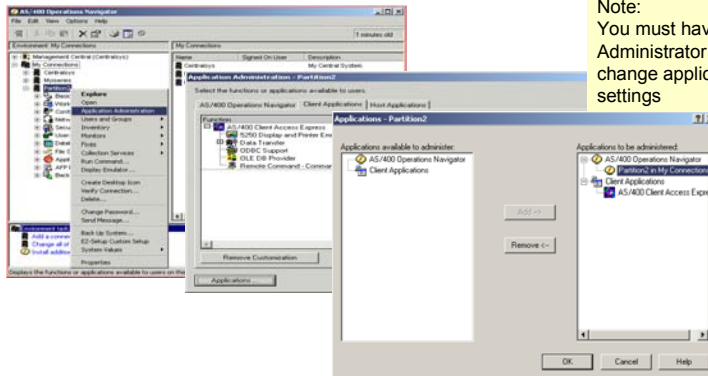


- Use user or group properties
- Capabilities button
- Applications tab

Notes: Application Administration - Registering Applications

Add and remove applications to be administered through Application Administration

No changes can be made to the "shipped value" for access settings until the application has been registered to Application Administration. If an application is shown in both lists on this dialog, it indicates the application has been registered on the iSeries, but there are some administrator functions for this application that are defined on this client, but are not registered on the iSeries. You can select the application and press "Add" to register the additional functions.

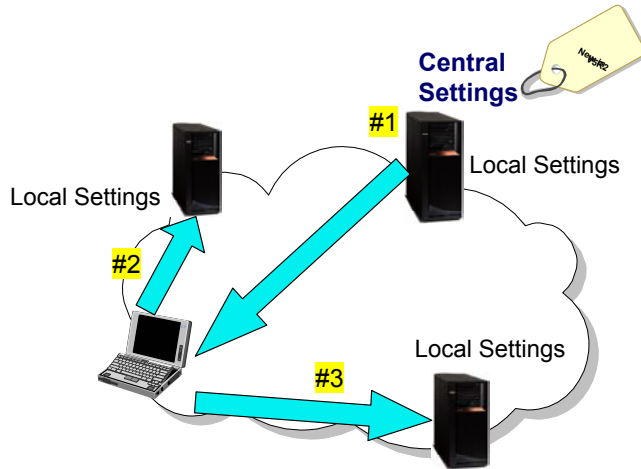


Note:
You must have Security Administrator Authority to change application access settings

Application Administration for iSeries Access for Windows

New in V5R2

Applies to iSeries Access for Windows functions only



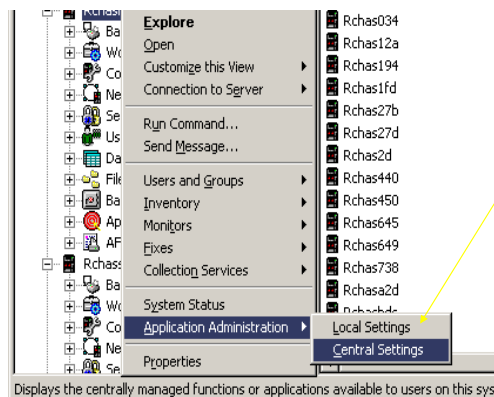
Application Administration - Local Settings

Local Settings

- Can reside on any iSeries
- Were the only type of administrative settings supported by Application Administration prior to V5R2.

They are now called Local Settings because:

- Each iSeries maintains its own set of Application Administration settings.
- When an iSeries Access for Windows client accesses multiple iSeries servers, it will use whatever Local Settings were defined on each server it connects to...



Displays the centrally managed functions or applications available to users on this system

More Details:
www.ibm.com/eserver/iseries/navigator/presentations.htm
 Look for "V5R2 App Admin Enhancements"



Notes: Application Administration - V5R2

How Does Application Administration Work?

- Application Administration settings are stored on the iSeries and associated with the user profile.
- Software calls AppAdmin APIs to determine if it can perform a particular function or not.
- For iSeries Navigator and Client Applications, AppAdmin API downloads the AppAdmin data from the iSeries as needed.
- The data is cached on the PC, and updated when the AppAdmin data on the iSeries changes.
- No special PC configuration is required. Application Administration is built into iSeries Access for Windows (5722-XE1).

In order to support the functionality previously only available via "iSeries Access for Windows" Policies templates, Application Administration introduced several new concepts in V5R2:

- Administration System: The "Administration System" is any V5R2 or later iSeries that has been configured to serve "Central Settings" to client PCs. By default, all iSeries are configured to not be an "Administration System".
- Local Settings: Local settings can reside on any iSeries and were the only type of administrative settings supported by Application Administration prior to V5R2. They are called "local settings" because each iSeries maintains its own set of Application Administration settings. When an iSeries Access for Windows client accesses multiple iSeries servers, it will use a different set of local settings for each server.
- Central Settings: Central settings are new in V5R2 and can only be supported by V5R2 or later iSeries servers that are configured as an "Administration System". Only V5R2 or later iSeries Access for Windows clients will retrieve central settings from an "Administration System". The central settings affect iSeries Access for Windows properties that apply to all iSeries servers that the client may access. The main difference between "Central Settings" and "Local Settings" is that the central settings are retrieved from a single central server, while local settings are retrieved from each iSeries being accessed by the PC.

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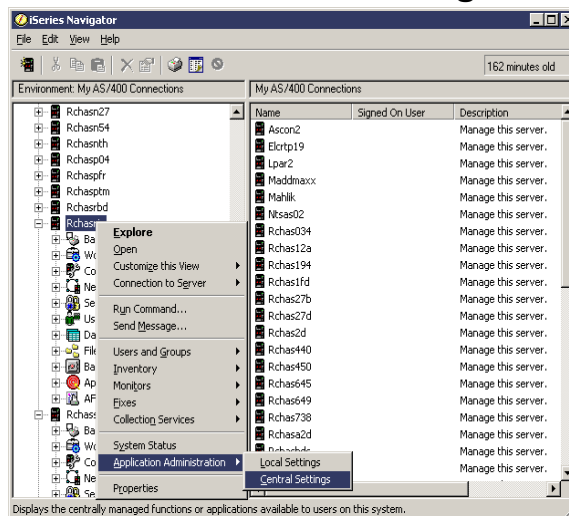
Application Administration - Central Settings

Central Settings:

- Affect iSeries Access for Windows properties that apply to all iSeries servers that the client may access.

Central settings are:

- New in V5R2
- Can only be used on OS/400 V5R2 or later
- V5R2 iSeries server must be configured as an "Administration System".
- Only V5R2 or later iSeries Access for Windows clients will retrieve central settings from an "Administration System"



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Notes: Administration System for iSeries Access for Windows users

In order to support the functionality previously only available via "iSeries Access for Windows" Policies templates, Application Administration introduced a new concept in V5R2 called **Administration System**: The Administration System is a central system that is used to manage many of the properties used by iSeries Access for Windows clients.

The Administration System is any V5R2 or later iSeries that has been configured to serve "Central Settings" to client PCs. By default, all iSeries are configured to **not be** an Administration System. A System Administrator must use Application Administration to configure an iSeries server before it can act as an Administration System. Typically a network will have only 1 iSeries system acting as the Administration System. This administration system will be used by iSeries Access for Windows clients as the source for their administration system settings. Although a network can have multiple iSeries systems defined as the administration system, iSeries Access for Windows clients will only use a single administration system for their central settings. defined,

An administrator can work with Users and Groups using Application Administration on a local server, but the administration systems provides additional ways to manage users and groups. An administrator can use the advanced settings of an administration system to control what environments are available to specific users and groups, and an administrator can control password, connection, service, and language settings. **NOTE:** You must have security administrator (*SECADM) and all object (*ALLOBJ) special authorities to work with the advanced settings on an Administration system.. This differs from other settings in Application Administration which only require security administrator (*SECADM) special authorities to make changes.

You can create an Administration System to manage many of the properties used by iSeries Access for Windows clients. To create an Administration Instance, follow these steps:

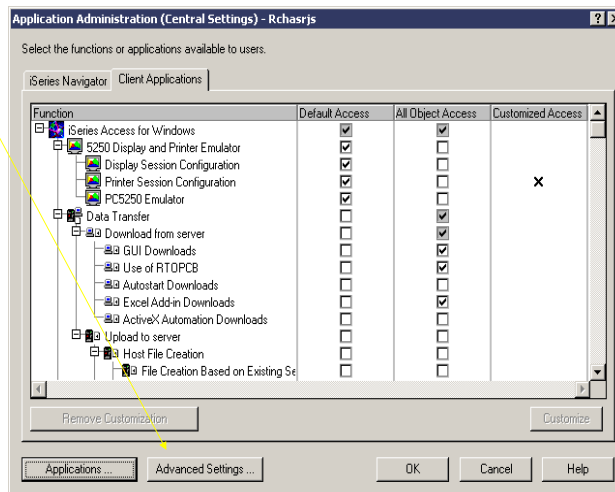
- Right click on the system you want to be the Administration System, and select Properties
- Click the Administration System Tab
- Select Administration System to treat the system as your Administration System

Application Administration - Central Settings

Central Settings support Advanced Settings

This allows an administrator to customize many of the properties used by iSeries Access for Windows, such as:

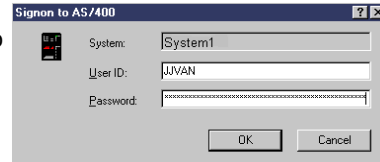
- Defining a set of environments to be used by the client
- Customize many of the connection, service, language, and password used by the clients





Long Password Support

- Connections to iSeries servers can now be done with 128-character passwords, for better security.
- The Password Level (QPWDLVL) must be set to 2 or 3 for these long passwords to be used.
 - A value of 0 is the default and allows 1 to 10-character passwords.
 - A value of 1 allows 1 to 10-character passwords and iSeries Netserver passwords for Windows 95,98,Me will be removed from the system.
 - A value of 2 enables 1 to 128-bit passwords.
 - A value of 3 enables 1 to 128-bit passwords, and iSeries Netserver passwords for Windows 95,98,Me will be removed from the system.
- Password level can be modified in green screen, or through Security ->Policies within iSeries Navigator.



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40-bit and 56-bit Encryption Removed

On iSeries

Cryptographic Access Provider
LPP (5722-ACx)

- AC1 = 40-bit (V5R1)
- AC2 = 56-bit (V5R2)
- AC3 = 128-bit

Client Encryption LPP (5722-CEx)

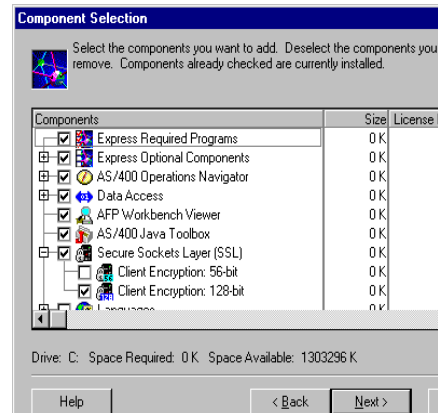
- CE 1,2,3

On PC

Client Encryption LPP (5722-CEx)

- CE1 = 40-bit
- CE2 = 56-bit
- CE3 = 128-bit

**New: 128-bit SSL included on
V5R3 iSeries Access PC CD**



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Notes: SSL

Secure Sockets Layer (SSL) is a popular security scheme that allows the PC client to authenticate the server and encrypts all data and requests. Use it when transferring sensitive data between clients and servers. The transfer of credit card and bank statement information are examples of client/server transactions that typically take advantage of SSL. There is an increased cost in performance with SSL because of the added encryption and decryption processing.

iSeries Access for Windows includes optionally-installable support for Secure Sockets Layer (SSL) and a way to manage key databases with IBM Key Management. All functions of iSeries Access for Windows can communicate over SSL except Incoming Remote Command and Ultimea. However, on a PC using an Intel 64-bit processor, such as Itanium, only 32-bit applications and connections can use SSL. iSeries Access for Windows allows SSL communications with the iSeries server at the 128-bit level of encryption.

Beginning in with iSeries Client Access Express for Windows (V5R1 version), client authentication is also available for PC5250.



Kerberos added to V5R2 version

Signon information has not been specified for this iSeries connection. The signon information will be used each time you connect to this server.

Server: MYISERIESSYSTEM

iSeries signon information

- Use Windows user name and password, no prompting
CMINER
- Use default user ID, prompt as needed
- Prompt every time
- Use Kerberos principal name, no prompting

OK Cancel

Support for Kerberos authentication of users

- Kerberos ticket can replace the sending of userid and password from a PC to the iSeries.
- Kerberos authentication as a new connection property to select



Notes: Kerberos Vs EIM

We all want something to keep all of our passwords in sync for all of our iSeries. As computing environments get more complex, and more and more servers are added, IT shops need a way to simplify the management of users across disparate systems and applications. While managing user identities can be challenging in a shop with multiple iSeries machines, the complexity compounds when you try to manage users across a network of dissimilar hosts. Additionally, users often have different names on different systems and even different names within multiple applications on the same system. System administrators aren't the only set of people who have multiple IDs, as application developers build applications that pull data from multiple, often disparate, systems. These developers often must resolve the differences in user IDs on all of these systems in order to make their applications function. And when they must, they often compound the problem by implementing a new user registry to control access to their application. Finally, industry studies say that a typical user has an average of 14 passwords to memorize between work, home, and various Web interfaces. Remembering all those passwords is tough. Requiring hundreds of users to manage 10+ passwords apiece makes our systems and networks inherently less secure.

Kerberos offers many advantages over other ways of managing the sign-on process. Some of the more important advantages are the fact that passwords are not stored or transmitted in any clear text or de-encryptable form, user enablement (or disablement) is done at a single point, and there is no way for passwords to get out of sync because a user's passwords are not stored on every single system. Best of all, Kerberos is an industry standard that is already supported in Windows(W2K and above), most versions of UNIX, and Linux. And as IBM rolls out their OS updates through the rest of this year, look for support for EIM-enabled Single Signon on all of the servers in the eServer line.

On 4/29/2002, IBM announced Enterprise Identity Mapping.(EIM). EIM fits nicely into two prominent IBM initiatives: eServer and eLiza. IBM also announced a Single Signon application that will run on top of EIM, but please don't confuse the two. EIM is designed to allow system administrators to associate user registries (an EIM term) across a variety of systems. Single Signon is the first application built on top of the EIM infrastructure, and it improves other "password synchronization" schemes that have been available to iSeries customers to date. The Single Signon solution uses the Kerberos network authentication protocol standard to authenticate a user and then grants that user a one-time use, time-limited Kerberos "ticket" that the user can present to all of the Kerberos-enabled servers in the network. If the ticket is valid for the system in question, access is granted. If the ticket is not valid for the system (or has expired), access is denied. EIM and Single Signon are included with OS/400

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Other Functions in iSeries Access for Windows

**iSeries Navigator
Operations Console
EZ-Setup**

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Notes: Sources of Technical Information

iSeries Access web site is <http://www.ibm.com/eserver/iseries/access>

- Contains the latest information about the entire family of Client Access products, including Client Access Express for Windows, such as late breaking news, Information APARS, FAQs, information on beta programs, how-to information, service and support, new product announcements, plus much more.
- Provides links to other important web pages, such as iSeries Navigator, Operations Console, AS/400 NetServer, etc

Client Access Express for Windows Redbook (SG24-5191)

- Access online by going to Client Access web page and selecting AS/400 Client Access Express for Windows: Implementing V4R4M0, SG24-5191 from main page.

AS/400 Information Center

- Contains information on workshops, tools, and other technical information on topics such as Client Access, Operations Navigator, Domino for iSeries and more. Also provided is an AS/400 Client Access Express Administrators Guide which has technical information on the Express client content for advanced users, such as administration and programming documentation. This can be accessed by going to the Client Access web page, then selecting 'AS/400 Information Center' from main page.

AS/400 Online/Softcopy Library

- Is an entire library of AS/400 books organized into bookshelves, accessible on CD or on the internet. The books on the CD-ROM can be read using the IBM Library Reader program, provided on the CD-ROM.

Toolkit for iSeries Access for Windows

- Toolkit ships with Express. Install it when you install Express, or later use Selective Install to get it. It also has links to additional important programming information that is contained on the Client Access web page.
- Information on OLE DB and Visual Basic Wizards is at <http://www.ibm.com/eserver/iseries/access/oledb>
- AS/400 PartnerWorld for Developers web page (<http://www.ibm.com/eserver/iseries/developer/>) then search on ODBC) contains detailed tips and techniques for developing ODBC applications.



Web Information

iSeries Access web page has latest up-to-date information

- <http://www.ibm.com/eserver/iseries/access>

For Information on

- Information APARs on specific topics, such as Windows 2003 support
- Access to all Red Books and other Reference Manuals
- FAQs, Articles, links to Administrator Guide...

Select 'Additional Links'

- iSeries NetServer for information on setting up your file and print serving
- Operations Console for information on setting up a PC as your system console
- iSeries Navigator for i5/OS administration



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eServer	IBM (logo)	
	iSeries	

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