



15F System i Access for Windows: What's New?

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

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System i Access Sessions

Windows:

- • System i Access for Windows: What's New?

Web:

- Get to the Web Fast with System i Access for Web V6R1 (Overview)
- Run 5250 Through a Browser with System i Access for Web
- Database Access with System i Access for Web
- System i Access for Web: Setup and Configuration
- System I Access for Web: What an Administrator Needs to Know

Functional enhancements can be submitted via the FITS system. The url is:
<http://www.ibm.com/systems/i/software/access/>

And click on link "[Request for Design Change](#)"

Agenda

- Install
- Communications
- PC5250
- Database clients
- Data Transfer
- .NET Provider
- OLE DB
- ODBC
- Operations Console
- Packaging and Licensing
- Appendix A: Supplemental Install Information
- Appendix B: What's new in System i Navigator

Agenda

- ▶ **Install**
- Communications
- PC5250
- Database clients
- Data Transfer
- .NET Provider
- OLE DB
- ODBC
- Operations Console
- Packaging and Licensing
- Appendix A: Supplemental Install Information
- Appendix B: What's new in System i Navigator

Installation: DVD and Windows Operating Systems

- Install media for the PC:
 - Prior to V6R1, separate PC CD for each language
 - V6R1 – two-DVD set with all languages and 32-bit and 64-bit OS



Windows Operating Systems

•The V6R1 and V5R4 versions of System i Access for Windows can be installed on:

- Windows 2000
 - Windows XP Professional
 - Windows XP Tablet PCs
 - Windows 2003 Server
 - Windows Vista
- 64-bit Processors supported*
- Advanced Micro Devices (AMD64)
 - Intel with EM64T
 - Intel with Itanium

* Refer to www.ibm.com/systems/i/software/access/supportedos.html for the latest information



V5R3 System i Access for Windows installs on:

- Windows NT 4.0, 2000, XP, 2003

V5R2 System i Access for Windows installs on:

- Windows 98, ME, NT 4.0, 2000, XP, 2003

V5R1 System i Access for Windows installs on:

- Windows 95, 98, and ME, NT 4.0, 2000, XP

Windows Vista:

- Ultimate and Premium Editions are supported.

- V5R4 System i Access for Windows with service pack [SI25949](#) or later
 - PC5250 requires service pack [SI27741](#), available July 2007

- Refer to
- <http://www.ibm.com/systems/i/software/access/supportedos.html>

- and

- Informational APAR II14239 linked from that page
 - Permanent restrictions: No direct console (LAN Console is supported) or SCS print drivers
 - Workaround required for using help text

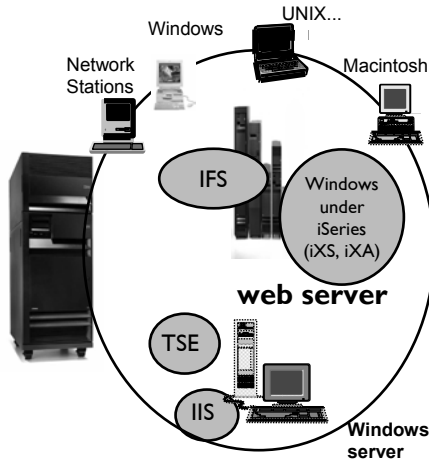
Installation: 64-bit Support and Image Locations

- 64-bit Processors supported:
 - Advanced Micro Devices (AMD64)
 - Intel with EM64T
 - Intel with Itanium

- Images are placed in:
 - QIBM\ProdData\Access\Windows\image32 (image for 32-bit based PCs)
 - QIBM\ProdData\Access\Windows\image64a (image for AMD 64-bit based PCs)
 - QIBM\ProdData\Access\Windows\image64i (image for Itanium based PCs)
 - QIBM\ProdData\Access\Windows\cwblaunch.exe detects processor type and launches setup.exe from the appropriate image directory

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)**
 - System i 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. System i Access runs on server, and fulfills requests for iSeries data (ie, ODBC, OLE DB, etc)



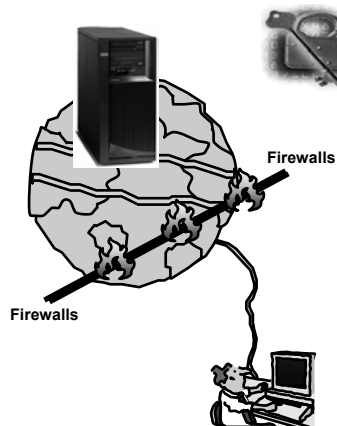
Supports leading network and security offerings...

Security

- **Secure Sockets Layer (SSL)**
 - Including SSL client authentication
- **Kerberos**
 - Enterprise Identify Mapping (EIM) can be used with Kerberos
- **Long passwords**

Networking

- **Virtual Private Networks (VPN)**
 - Tunneling protocol and encryption to ensure secure communications
- **NAT (Network Address Translation)**
 - Hides System i address when on Internet



If you do it on System i,
you can do it with
System i Access for
Windows...

Windows Installer Technology – new in V6R1

- V6R1 System i Access for Windows adds Windows Installer capability
 - Industry standard for installations on the Windows platform

- Provides standard mechanisms to...
 - manage installations
 - customize install packages with “transforms”
 - set install policies
 - install service packs
 - do silent installations more simply – no more response files!

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

What is the MSI package?

- A Windows Installer package is made up of an MSI file and source files

- An MSI file is a relational database. The tables within the MSI database describe:
 - installation logic, such as the sequence of actions
 - metadata about the resources that are to be installed

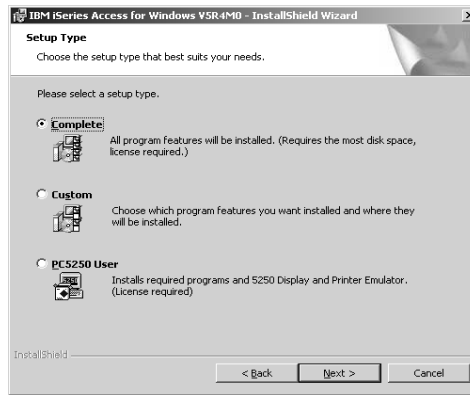
- “Feature”:
 - An application’s functions are separated into features (components)
 - Features can be installed independently

- “Public properties”:
 - Variables used at install time that can be set by the end user through the command line or in transforms
 - Define installation settings, such as target directory, type of install, list of features to be installed

- “Transform”:
 - The mechanism to customize the installation

Installation Options

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

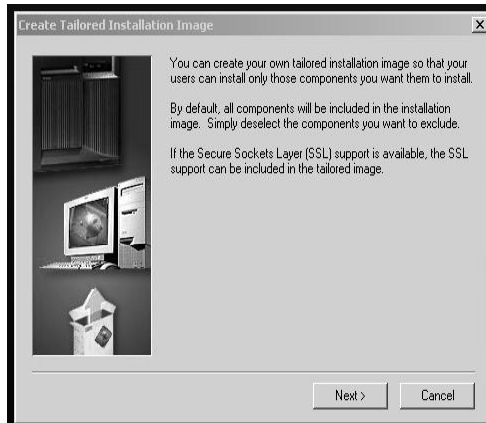


Transforms:

Customizing the installation package

Transforms

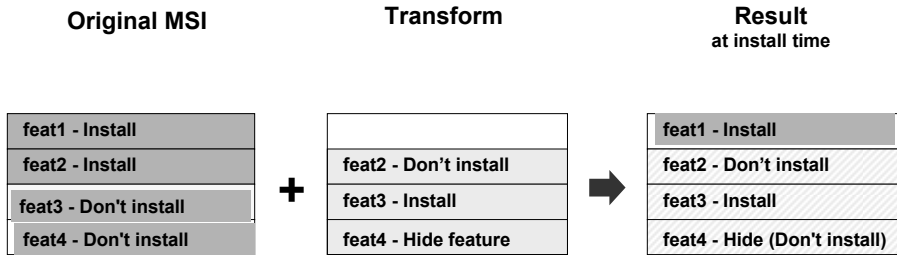
- Would you like to control which System i Access for Windows features your users install?
- Use Transforms to:
 - Modify the MSI package by excluding the unwanted features
 - Apply the transform to installations across your network
 - Users can easily install System i Access functions by selecting a single option



What are Transforms?

- The means to customize the installation package
 - A transform is a file that describes modifications to the MSI DB
 - Applied at install time
 - Running the “Tailored installation wizard” is not necessary
- Allow administrators to change the default settings of the installation package.
 - Create customizations for different groups in the organization by defining different combinations of features.
 - Pre-select features, deselect features, hide features from the features selection tree on custom installation
- Many tools are available to create transforms
 - InstallShield
 - Microsoft Orca is available at no cost

What are Transforms?

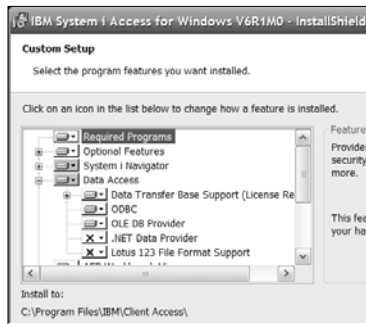


- Transforms are applied at install time
- The original MSI file is not altered
- The transform file is saved along with the MSI file, and gets applied every time an install task is started

Transforms

Without Transform

With Transform



More about transforms in i5/OS InfoCenter at

http://publib.boulder.ibm.com/infocenter/systems/scope/i5os/topic/rzaij/rzaijlrinstpkg.htm?tocNode=int_236227

Steps to create your own transform

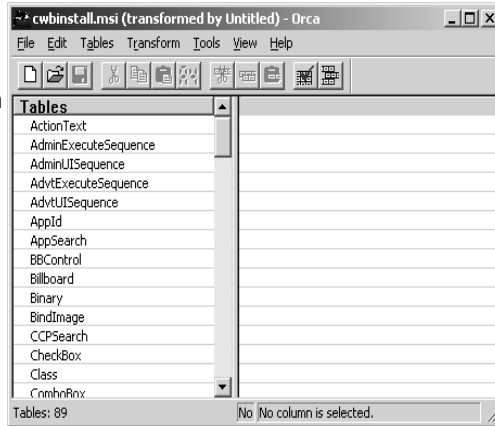
1. Open cwbinstall.msi in transform mode

Open Orca.

From the File menu, select Open and browse for **cwbinstall.msi**.

From the Transform menu, select New Transform.

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



Steps to create your own transform (continued)

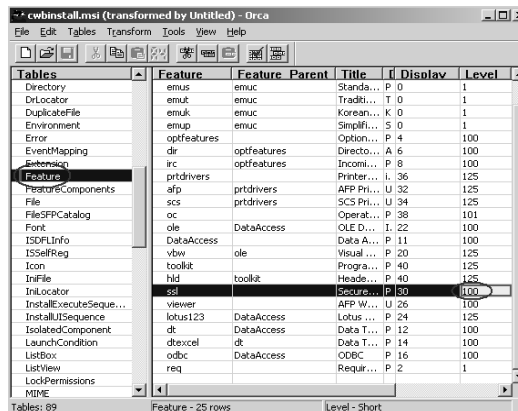
2. Modify the tables

From the left pane, select the table to modify.

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

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

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



Steps to create your own transform (continued)

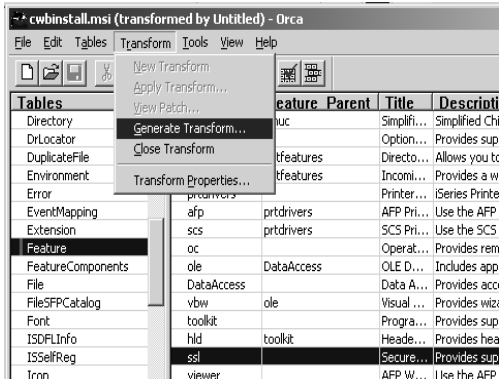
3. Generate the transform file

From the Transform menu, select Generate Transform.

Give your transform a meaningful name.

Transforms are created with a file extension of .MST.

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



Apply the transform

Two ways to apply the transform:

1. Apply it at the command line:

Type:

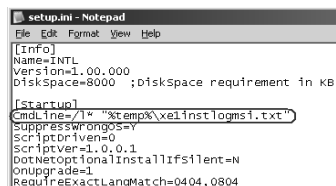
```
setup /vTRANSFORMS=odbc_pc5250_only.mst
```

or



2. Modify setup.ini, and users will get the transform automatically:

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



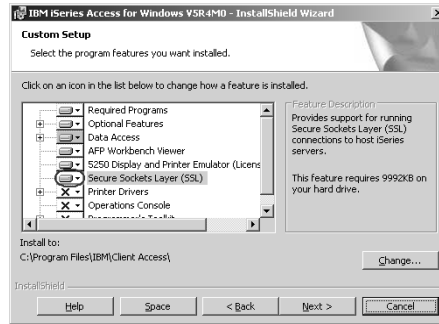
Apply the transform (continued)

- In a command prompt window, type
setup /vTRANSFORMS=MyTransform.mst

```
\> setup.exe
```



```
\> setup.exe  
/vTRANSFORMS=MyTransform.mst
```



Example

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

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

Example (continued)

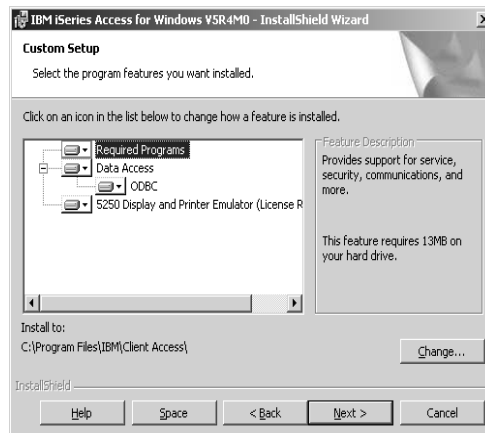
A level of 0 disables the feature

1. Open cwinstall.msi and select Transform>New Transform.
2. Open the Feature table.
3. Change the Level field to 0 for all features, except the ones you want to install:
 - req
 - emuc, emuk, emup, emus, emut
 - DataAccess
 - Odbc
4. Save the transform as odbc_pc5250_only.mst
4. Apply the transform with setup.ini or on the command line

Tables	Feature	Feature...	T...	D...	D...	L...	Directo...	Attribu...
CreateFolder	dir	appfeatures	D...	All...	5	0	INSTALLER	0
CustomAction	dir	appfeatures	S...	Pro...	6	0	INSTALLER	0
Dialog	inc	appfeatures	S...	Pro...	6	0	INSTALLER	0
Directory	ole	DataAccess	O...	Inc...	22	0	INSTALLER	0
Dislocator	viewer	A...	Un...	25	0	0	INSTALLER	0
Executable	dt	DataAccess	O...	Pro...	12	0	INSTALLER	0
Environment	obscoll	dt	D...	Pro...	14	0	INSTALLER	0
Error	oc	O...	Pro...	38	0	0	INSTALLER	0
EventMapping	mp	DataAccess	O...	Pro...	18	0	INSTALLER	0
Extension	prtdrivers	P...	ISE...	36	0	0	INSTALLER	0
Feature	slp	prtdrivers	A...	Un...	32	0	INSTALLER	0
FeatureComponents	sci	prtdrivers	S...	Un...	34	0	INSTALLER	0
File	vbs	ole	W...	Pro...	20	0	INSTALLER	0
FileSPICatalog	toolkit	P...	Pro...	40	0	0	INSTALLER	0
Font	hid	toolkit	H...	Pro...	40	0	INSTALLER	0
ISDNInfo	ssl	S...	Pro...	30	0	0	INSTALLER	0
ISSetting	ksasl23	DataAccess	L...	Pro...	24	0	INSTALLER	0
Icon	emuc	S...	PC...	28	1	0	INSTALLER	0
InfFile	emus	emuc	S...	PC...	0	1	INSTALLER	0
Indicator	emut	emuc	T...	Tr...	0	1	INSTALLER	0
InstallExecuteSequence	emuk	emuc	K...	0	1	0	INSTALLER	0
InstallISSequence	emup	emuc	S...	SE...	0	1	INSTALLER	0
IsolatedComponent	req	P...	Pro...	2	1	0	INSTALLER	24
LaunchCondition	DataAccess	D...	Pro...	11	100	0	INSTALLER	0
ListBox	odbc	DataAccess	O...	Pro...	16	100	INSTALLER	0
ListNew								
LockPermissions								
MIME								

Example (continued)

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



User Interface Levels

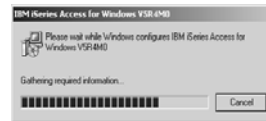
– In Windows Installer, an installation's **user interface** can have several **levels**:

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

Full user interface



Basic user interface



Setting the User Interface Level

- Now you have more control over how much GUI you see
- Full installation GUI
 - setup
- Reduced and Basic installation - only shows Progress bar and Cancel
 - setup /s /v"/qx" Reduced
 - setup /s /v"/qb" Basic
- None (silent install)
 - setup /s /v"/qn" No User Interface
- Does not require a response file as in previous releases
- Default settings defined in the MSI package are used
- Can set command line parameters to override default settings

Deploy System i Access for Windows using Active Directory

System i Access for Windows can be deployed using Active Directory

Active Directory is Microsoft's directory service

- Windows 2000 Server and Windows Server 2003

Some of the goals of Active Directory are:

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

Deploy System i Access for Windows using SMS

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

- Some features of SMS are:

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

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

- Links:

- SMS concepts:

<http://www.microsoft.com/technet/prodtechnol/sms/sms2003/cpdg/default.aspx?mfr=true>

- Distributing Windows Installer packages

<http://www.microsoft.com/technet/sms/20/deplymsi.msp>

Install from a Network Share

- You can share an installation image residing on the network, either at your NetServer or a Windows share.
- Your desktop users can map a drive to the network share.
- Users then will run setup.exe from the network drive to start System i Access for Windows installation.
- If one or more transforms must be applied:
 - Make sure that the transform file(s) are located in the source directory.
 - Two ways to apply the transform:
 - Users type `setup.exe /v"/"TRANSFORMS=transform1.mst,transform2.mst...`
 - or
 - Modify `setup.ini` to include any command options in the `CmdLine` key.

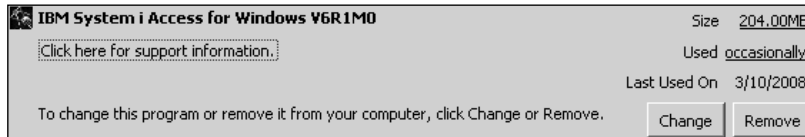
Installation: Language support

- With V6R1M0, there is a separation between the Setup language and the Primary language
 - Setup language is the language displayed during the install process
- Primary language is the language for System i Access for Windows resources



Installation: Installing

- First-time install
 - Default will perform a complete install
- Upgrade Install
 - Supports upgrading from V5R3 and V5R4 to V6R1
 - Default will upgrade to new release with same set of features
 - Can add/remove features during upgrade
- Selective Setup replaced with Add/Remove Programs
 - Maintenance Install



Installation: References

- The i5/OS Information Center contains a wealth of information about the new Installation options:
 - Installation and Setup main page:
http://publib.boulder.ibm.com/infocenter/systems/scope/i5os/index.jsp?topic=/rzaij/rzaijrzaijinstall.htm&tocNode=int_220374
 - Information for administrators:
http://publib.boulder.ibm.com/infocenter/systems/scope/i5os/index.jsp?topic=/rzaij/rzaijpccheck.htm&tocNode=int_226404
 - Tailoring the Installation Image to install onto multiple PCs:
http://publib.boulder.ibm.com/infocenter/systems/scope/i5os/index.jsp?topic=/rzaij/rzaijprepinstlimg.htm&tocNode=int_232035

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Communications: IPv6 Support

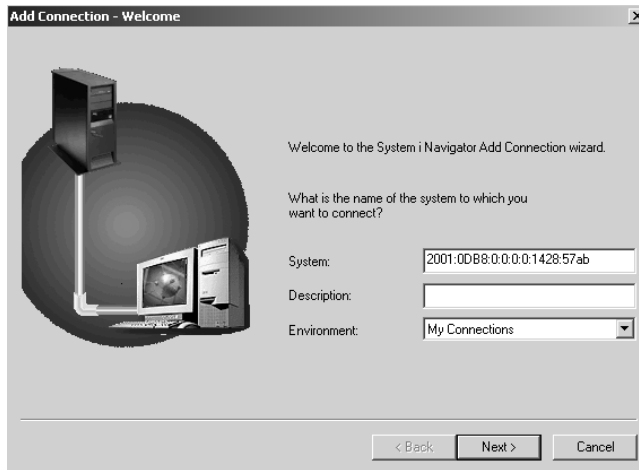
- The size and format of the IPv6 address expands addressing capability
 - The IPv6 address size is 128 bits. The preferred IPv6 address representation is:

xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx

where each xxxx is a 16-bit hexadecimal value

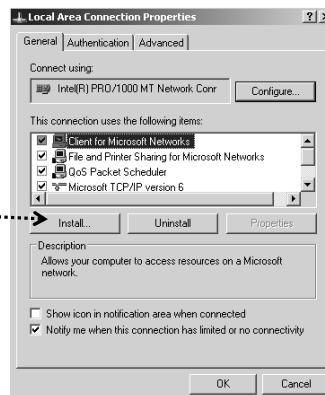
- IPv6 addresses range from 0000:0000:0000:0000:0000:0000:0000:0000 to ffff:ffff:ffff:ffff:ffff:ffff:ffff:ffff
- IPv6 can handle traditional IPv4 addresses
- If IPv6 is available, System i Access will use it
 - Network must support it: bridges, routers, gateways

Communications: Configuring IPv6



Communications: IPv6 Support

- Pre-Installed on Vista and Windows Server 2008
- Can be installed onto Windows XP
 - Local Area Network
 - Properties
 - Install...
 - Protocol
 - Add
 - Microsoft TCP/IP Version 6



- See <http://www.microsoft.com/technet/network/ipv6/ipv6faq.mspx> for IPv6 information from Microsoft

Agenda

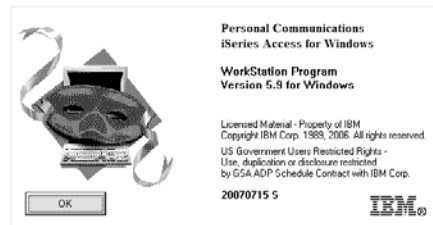
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PC5250: V5.9 Enhancements

System i Access includes Personal Communications 5250 V5.9.

• V6R1 enhancements include:

- Support to disable the minimize, restore, and close options of PC5250 sessions
- Support to store window size, position, and font for each .WS
- Support to hide menu bar, toolbar, and operator information area
- Support to control Poppad focus & scrollbars
- Support to override Shift Lock in German and Austrian keyboards



PC5250: V5.9 Enhancements

- **V6R1 enhancements, continued...**
 - Print support for header and footer on PrintScreen commands
 - Support to retrieve PC5250 emulator package information from the Help → About dialog
 - Support Environment variable in Toolbar profile path
 - Improved high-resolution display for English and West European languages
 - Support disabling STRPCCMD command based on workstation keywords

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Database clients: Enhancements

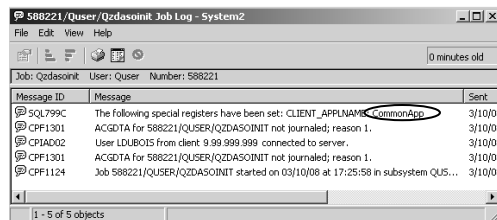


The Database programming client interfaces (ODBC Driver, OLE DB Provider, .NET Provider) added support for the following in V6R1M0:

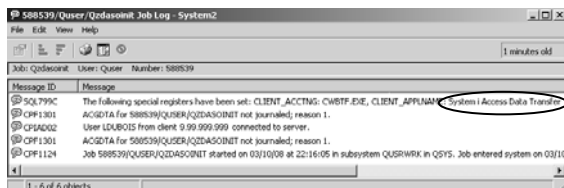
- Decimal Float data type
 - IEEE 754 standard, similar to both packed decimal and binary floating point
 - Larger range of precise numbers than floating point
 - Can hold larger numbers than packed decimal
 - Properties to configure handling of decimal float errors and rounding mode
- The ability to correctly translate stored procedure result data which uses date and time formats other than the type specified on the connection
- New properties for setting client-specific information, corresponding to SQL special registers
- New property to configure the Query Storage Limit for SQL queries

Database clients: Application name in joblog

- The Database clients send information to the System i at Connect time which allows system administrators to determine the running Application Name. This name appears in the System i Server joblog.



.NET application: CommonApp.exe



Data Transfer From System i

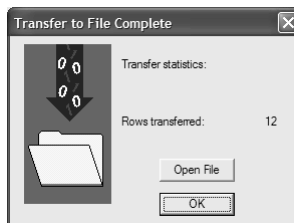
Programming interfaces also have a property for setting Application Name

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Data Transfer: Launch a file after download

- Open any saved .DTF file or start a transfer to file or HTML
- When the transfer completes, this dialog will be displayed.
Click on the “Open File” button to launch the application

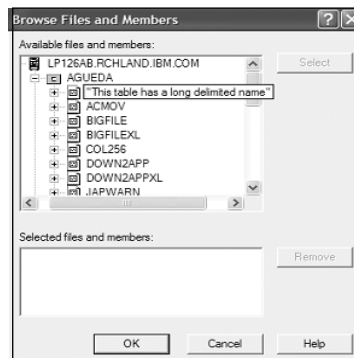


Data Transfer: Parameter markers

- Support for parameter markers in download WHERE clause
 - When parameter markers are used in the WHERE clause, you can create a single .DTF and provide different values at run time
 - A label is associated with each parameter marker, so when you perform the transfer request, you know which value must be provided

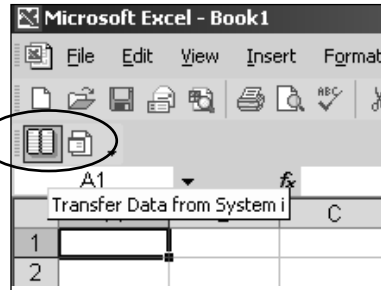
Data Transfer: Support for 128-char table names

- Table names in System i can be represented as 10-character System names, or as 128-character SQL names. Data Transfer now fully supports both SQL and System table names.
 - New option on the “Display” panel to configure this
 - The default is now to display the SQL name



Data Transfer: New Excel Add-in

- New COM-based Excel Add-in
 - Works like the old one, but you can now open several Excel instances and transfer data from all of them
 - Add-in can be fully used in Excel 2007, as the new code supports Excel limits
 - Maximum columns 16,384 or XFD
 - Maximum rows 1,048,576



Data Transfer: Decimal float data type

- This new data type is supported for download/upload operations with the following file format: Lotus 123, Lotus 123v9, WK4, BIFF3, BIFF4, BIFF5, BIFF7, BIFF8, CSV, Tab delimited Text, DIF, MS Excel XML Spreadsheet.
 - Downloading DECFLOAT to HTML, Printer or Display is also supported.

Data Transfer: Other enhancements

- Ability to set a default data type when scanning documents
- List file support in RXFERPCB application that allows users to run download or upload transfer requests in batch mode



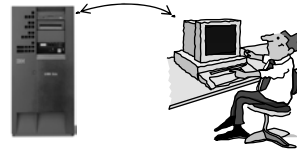
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.NET Provider: Enhancements

- **V6R1 enhancements include:**

- Support for ADO.NET 2.0 base class model System.Data.Common
- Provider class factory – iDB2Factory
- Distributed transactions using the System.Transactions namespace
- Multi-row (block) inserts using the iDB2Connection.AddBatch method
- Running in 64-bit mode
- Enhanced optimistic update option using Row Change Timestamp and extended indicator values via iDB2CommandBuilder
- Permission classes
- Plugs into Visual Studio 2005 Server Explorer



.NET Provider: Enhancements

- **V6R1 enhancements, continued...**

- Improved control over sending and receiving data in blocks
- Decimal float and datalink data types
- Many new ConnectionString properties
- New iDB2Exception types:
 - iDB2NullValueException
 - iDB2TransactionFailedException



.NET Provider: New properties

- Distributed Transaction properties:
 - Enlist
 - TransactionCompletionTimeout
 - XaLockTimeout
 - XaTransactionTimeout
- Miscellaneous properties:
 - AutocommitIsolationLevel
 - BlockSize
 - LobBlockSize
 - NumericErrorOption
 - QueryStorageLimit
- Properties corresponding to new Special Registers:
 - ApplicationName – default value is the name of the .exe program
 - ClientAccounting
 - ClientProgram ID
 - ClientUser ID
 - ClientWorkstation
- Decimal float properties:
 - DecfloatErrorOption
 - DecfloatRoundingMode
 - The DecNumericAsString property also applies to Decimal float types

.NET Provider: New properties

- Properties that can inherit from iDB2ProviderSettings or be set on the ConnectionString:
 - DateTimeAsString
 - DecNumericAsString
 - CharBitDataAsString
 - CharBitDataCcsid
- Schema property:
 - SchemaSearchList
 - ✓ Only used with the GetSchema methods
 - ✓ Useful with Visual Studio Server Explorer

Setting these properties on the ConnectionString overrides whatever may be set in iDB2ProviderSettings.



When SchemaSearchList is not specified, the default value depends on the naming convention:

SQL naming → DefaultCollection
System naming → LibraryList

.NET Provider: References

- Recommend installing the latest service pack:
<http://www.ibm.com/systems/i/software/access/windows/casp.html>

- NET Technical Reference:
 - Part of the Programmer's Toolkit feature
 - C:\Program Files\IBM\Client Access\Mrixxxx\cwbmptch.hlp
 - You can also find a link to the Technical Reference from here:
System i Access for Windows → Programmer's Toolkit → Database → .NET Framework Classes

- Web page for .NET provider:
<http://www.ibm.com/systems/i/software/access/windows/dotnet/>

Agenda

- Install
- Communications
- PC5250
- Database clients
- Data Transfer
- .NET Provider
- ▶ **OLE DB**
- ODBC
- Operations Console
- Packaging and Licensing
- Appendix A: Supplemental Install Information
- Appendix B: What's new in System i Navigator

OLE DB Provider: Enhancements

- In addition to the common Database Client enhancements listed earlier, V6R1 enhancements to the OLE DB Provider include:
 - Support for new Extended Indicator values
 - New support added to DB2 for i5/OS in V6R1M0
 - More Connection String properties

OLE DB Provider: Extended Indicators

- DEFAULT
 - Can only be used in VALUES clause of an INSERT statement
insert into table values(?, ?)
 - Using the DEFAULT indicator value will cause the server to insert the default value for that parameter, if one exists
- Syntax:
 - OLE DB: set DBSTATUS_S_DEFAULT
 - ADO/VB: leave the parameter value unassigned

✓ Contrast this with the syntax for passing NULL data:

 - OLE DB: set DBSTATUS_S_ISNULL
 - ADO/VB: set the parameter value to Null
- Restrictions:
 - No cast, subqueries, arithmetic or complex expressions can be mixed in with the special indicator values

OLE DB Provider: New properties

- Properties corresponding to new SQL Special Registers:
 - Application Name
 - Client Accounting
 - Client Program ID
 - Client User ID
 - Client Workstation Name

- Decimal float properties:
 - Decfloat Error Option
 - Decfloat Rounding Mode

- Other properties:
 - Handle Numeric Data Errors
 - Keep Trailing Blanks → affects variable-length types
 - Query Storage Limit

Agenda

- Install
- Communications
- PC5250
- Database clients
- Data Transfer
- .NET Provider
- OLE DB
- ▶ **ODBC**
- Operations Console
- Packaging and Licensing
- Appendix A: Supplemental Install Information
- Appendix B: What's new in System i Navigator

ODBC Driver: Enhancements

- In addition to the common Database Client enhancements listed earlier, V6R1 enhancements to the ODBC driver include:
 - Support for new Extended Indicator values
 - 128-byte cursor names
 - Default record blocking size changed to 256K
 - New Connection String keywords and corresponding ODBC GUI settings
 - Some GUI dialog information moved around
 - Support for derived key indexes

ODBC Driver: Extended Indicators

- New Extended Indicator support added to DB2 for i5/OS V6R1M0:
 - DEFAULT
 - Can only be used in VALUES clause of an INSERT statement insert into table values(?, ?)
 - Using the DEFAULT indicator value will cause the server to insert the default value for that parameter, if one exists
 - SQL_DEFAULT_PARAM constant
 - UNASSIGNED
 - Can only be used in SET clause of an UPDATE statement
 - update table set col1 = ?, col2 = ? where keyfield = ?
 - Using the UNASSIGNED indicator value will cause the server to ignore the value for the UNASSIGNED parameter
 - Indicator value -7
- Restrictions
 - No cast, subqueries, arithmetic or complex expressions can be mixed in with the special indicator values

ODBC Driver: New Connection String keywords

- Properties corresponding to new SQL Special Registers:
 - CLIENTAPPLNAME
 - CLIENTACCTSTR
 - CLIENTPROGRAMID
 - CLIENTUSERID
 - CLIENTWRKSTNNAME

- Decimal float properties:
 - DECFLOATERROROPTION
 - DECFLOATROUNDMODE
 - MAPDECIMALFLOATDESCRIBE

- Other properties:
 - QRYSTGLMT

- Web site for Connection String keywords:
<http://publib.boulder.ibm.com/infocenter/systems/scope/i5os/index.jsp?topic=/rzaik/connectionkeywords.htm>

Agenda

- Install
- Communications
- PC5250
- Database clients
- Data Transfer
- .NET Provider
- OLE DB
- ODBC
- ▶ **Operations Console**
- Packaging and Licensing
- Appendix A: Supplemental Install Information
- Appendix B: What's new in System i Navigator

Operations Console: Enhancements

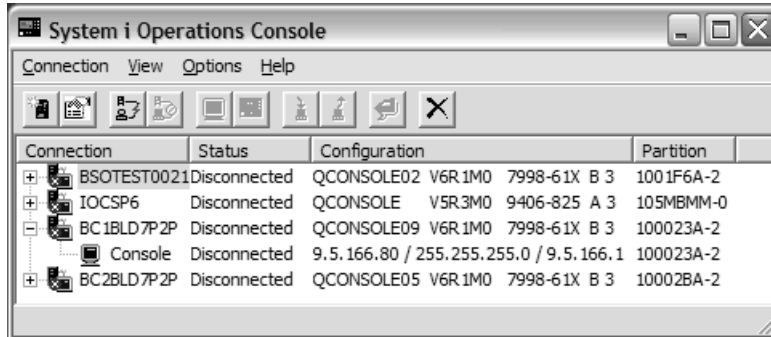
- V6R1M0 enhancements include:
 - Support for shared resources
 - You can now add a LIND to the same network resource (CMNnn) that the console uses.
 - Don't add the console to the resource where a LIND already exists. Add the LIND to the console resource.
 - Simplified client
 - Auto-create service tools device IDs when connecting to V6R1M0 systems
 - Auto-discovery of systems when connecting to V6R1M0 systems
 - Automatically control the access password → this is the default behavior
 - Service pack 1 recommended

Operations Console: Auto Discovery

- Auto Discovery of systems is a great improvement!
 - Only works with V6R1M0 systems
 - Works similar to BOOTP, has the same requirements
 - Can be turned off from the Settings page
 - Service Tools Device IDs can be auto-created if auto-create device IDs is enabled
- With pre-V6R1M0 systems, even manually adding systems is now easier. After entering the service name of the system you want to connect to, this information is automatically filled in:
 - Version/Release/Modification level
 - Serial Number
 - Partition ID
 - Gateway specification
 - Subnet mask

Operations Console: New GUI Look

- The V6R1M0 systems shown in this window were auto-discovered and auto-added. The others were configured manually.



Agenda

- Install
- Communications
- PC5250
- Database clients
- Data Transfer
- .NET Provider
- OLE DB
- ODBC
- Operations Console
- ▶ **Packaging and Licensing**
- Appendix A: Supplemental Install Information
- Appendix B: What's new in System i Navigator

System i Access Family - Packaging

V6R1 5761-XW1 System i Access Family	V5R4 5722-XW1 iSeries Access Family
System i Access for Windows 5761-XE1, V6R1	iSeries Access for Windows 5722-XE1, V5R4
System i Access for Web 5761-XH2, V6R1	iSeries Access for Web 5722-XH2, V5R4
System i Access for Linux 5761-XL1, Vx.x (V6R1)	iSeries Access for Linux 5722-XL1, V1.10 (V5R4)
System i Access for Wireless 5722-XP1, V5R3	iSeries Access for Wireless 5722-XP1, V5R3
V5R4 i5/OS customers not wanting to upgrade to V6R1 i5/OS but want the new V6R1 System i Access Family clients can order no-charge Feature No. 2649 of Product No. 5722-XW1	

System i Access Family - Licensing

Description	Product	Product Number	Need 5761-XW1 to use?
Family Name	➤ System i Access Family	5761-XW1	
Windows client	➤ System i Access for Windows	5761-XE1	Yes (for 5250 and Data Transfer)
Linux client	➤ System i Access for Linux	5761-XL1	Yes (for 5250)
Browser Access	➤ System i Access for Web	5761-XH2	Yes
Handheld / Wireless offering	➤ System i Access for Wireless ➤ iSeries Toolbox for Java ME	5722-XP1	No
i5/OS systems management	➤ System i Navigator ➤ Operations Console	Packaged in 5761-XE1	No

Flexible Purchase Options

Processor-Based = purchase price based on software tier, connect unlimited numbers of users

User-Based = purchase only number of users who will be concurrently connected

Note: Can upgrade from User-Based to Processor-Based, but cannot go back to User-Based after purchasing Processor-Based

Software maintenance included in base i5/OS software subscription

System i Access Family - Licensing

- System i Access Family (5722-XW1 or 5761-XW1) unlimited user feature is now included with some System i hardware. This allows any i5/OS user to connect to that specific System i and use any of the System i Access Family products at no additional charge. This includes:
 - System i Access for Windows
 - System i Access for Web
 - System i Access for Linux
- See <http://www.ibm.com/systems/i/hardware/editions/> for more information about the System i hardware editions and the features included in each

Agenda

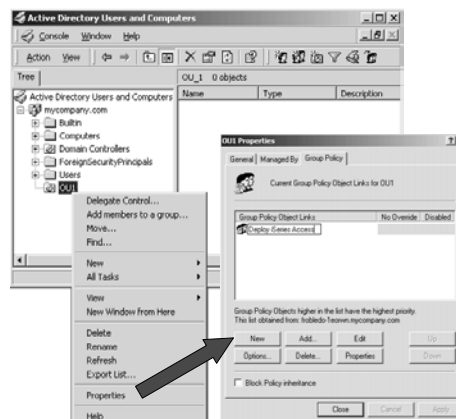
- Install
- Communications
- PC5250
- Database clients
- Data Transfer
- .NET Provider
- OLE DB
- ODBC
- Operations Console
- Packaging and Licensing
- ▶ **Appendix A: Supplemental Install Information**
- Appendix B: What's new in System i Navigator

Deployment with Active Directory

- System i Access for Windows V6R1 can be rolled out over the network using Active Directory
- Active Directory is Microsoft's directory service; it's part of Windows 2000 Server and Windows Server 2003.
- The MSI package is deployed via a **Group Policy Object (GPO)** to one or more **Organizational Units (OU)** within the domain.
- System i Access for Windows is **installed silently** onto every target computer the **next time they are rebooted**.
- A user with **administrative permissions** is **NOT required** to log in.

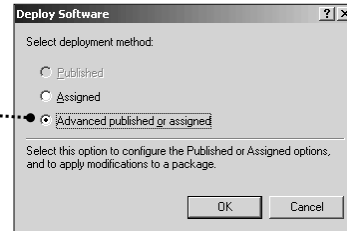
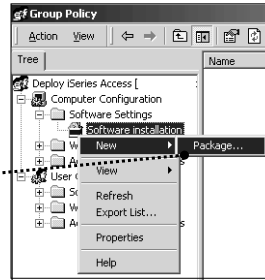
Deployment with Active Directory

1. Create a network drive that points to the location of your installation image.
2. Create a Group Policy Object:
 - Start → Programs → Administrative Tools → Active Directory Users and Computers.
 - Right click on the target OU and select Properties.
 - In the Group Policy tab, click the New button to bring up the Group Policy dialog.



Deployment with Active Directory

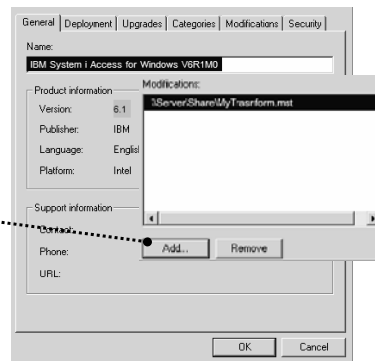
3. Go to Computer Configuration → Software Settings
4. Right click on Software Installation and select New → Package
5. From the Open dialog, browse for cwinstall.msi
6. In the Deploy Software dialog, choose "Advanced published or assigned"



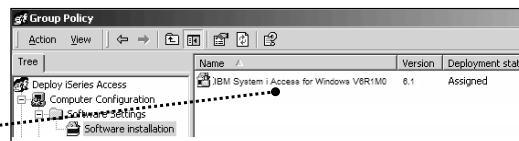
77

Deployment with Active Directory

7. On the Modifications tab, click Add and select the transform(s) to be applied to computers in the current GPO
8. Click OK to finish



The new package will be listed in the right pane of the GPO



78

Logging during Installation

- During System i Access for Windows installation, install problems can be diagnosed by turning logging on
 - Note: Logging is turned on by default
- Specify logging options on the setup.exe command line using the /L parameter:
 - Setup /v"/L*v C:\myFolder\myLog.txt"
 - '*' means log all type of messages (status, warnings, errors, values, etc)
 - 'v' adds verbose information
 - C:\myFolder\myLog.txt specifies the target log file
- Setup.ini specifies the following log options in the CmdLine key:
 - /!* "%temp%\xe1instlogmsi.txt"
 - Creates a log file called xe1instlogmsi.txt in the temporary folder

Logging during Installation

- You can set the Logging machine policy to default logging options:
 1. In the Registry Editor, open the key
HKEY_LOCAL_MACHINE\SOFTWARE\Policies\Microsoft\Windows\Installer
 2. Add a new String Value called Logging
 3. Enter voicewarmup as the value data



- Every time the System i Access for Windows installer is invoked, a log file is created in the temp directory with a name of MSIxxxxx.log, where xxxxxx are random characters
- Notice that the Logging policy applies to all MSI-based applications
 - Be aware that with time this may consume several tens of MBs on your hard drive!

SETUP.EXE Command Line Parameters

- Useful command parameters:
 - `setup /v"/q[r|b|n]" /s`
Starts a silent install with reduced, basic, or no user interface

 - `setup /v"/L*v C:\MyFolder\install.log"`
Generates a verbose log file called install.log in the specified location

 - `setup /v"ADDLOCAL=feature1,feature2,..."`
Preselects only the specified features. Since setup launches with a full user interface, the end user will be able to change the selections

 - `setup /v"ADDLOCAL=feature1,feature2,... /qb" /s`
Preselects only the specified features. Since setup launches with a basic user interface, the end user cannot change the selections

SETUP.EXE Command Line Parameters

- `setup /v"TRANSFORMS=transform1.mst;transform2.mst;..."`
Applies the transforms called transform1.mst, transform2.mst, etc

- `setup /v"CWBINSTALLTYPE=[Complete|Custom|PC5250User]"`
Sets setup type to either Complete, Custom or PC5250User.

- `setup /v"CWBPRIMARYLANG=MRI29xx"`
Sets the primary language for System i Access for Windows, where MRI29xx is the language's code (e.g. MRI2924 for English, MRI2932 for Spanish, etc.)

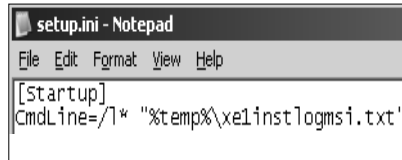
- `setup /v"REMOVE=feature1,feature2,..."`
Uninstalls the specified features

- `setup /v"REMOVE=ALL"`
Uninstalls the product

SETUP.EXE Command Line Parameters

- Alternatively, specify command line parameters in setup.ini:

1. Open setup.ini with Notepad
2. Locate the key called CmdLine
3. Enter any valid MSI parameter



```

[Startup]
CmdLine=/! * "%temp%\xe1instlogmsi.txt"

```

- Examples:

- `CmdLine=/! * "%temp%\xe1instlogmsi.txt"`
Generates a .log file called xeinstlogmsi.txt in the temp folder
- `CmdLine=ADDLOCAL=req,emu /! *v MyLog.txt /qb`
Installs Required Programs and PC5250 Emulator, generates a verbose log, and runs in Basic user interface mode.

SETUP.EXE Command Line Parameters

Important!

- **Do not combine MSI parameters using setup.ini and the /v parameter at the same time, otherwise any parameters specified in setup.ini will be ignored.**
 - ✓ Either use the /v switch to pass in any MSI parameter, or specify your parameters in setup.ini and avoid using /v

Setup Language and Primary Language

- **Setup language** is the language displayed during the install process
 - Defaults to the Operating System's Current Locale
- **Primary language** is the language for System i Access for Windows runtime resources
 - If multiple primary languages are available at the source, the installer determines the default primary language in the following order:
 1. The same language as setup language, if found on source.
 2. If (1) is not met, then primary language is defaulted to the primary language of System i, if found on source.
 3. If (1) and (2) are not met, then primary language is defaulted to English, if found on source.
 4. If (1), (2) and (3) are not met, then primary language is defaulted to the first language available at source

Setup Language and Primary Language

- If install is launched in silent mode, then the defaults are used
 - Setup language for progress dialogs and errors is defaulted to OS's current locale. Subsequent setups will use the same language
 - Primary language will be defaulted as explained on the previous page
- Use the `CWBPRIMARYLANG` property to preset primary language (useful for overriding default choice on silent installs):

```
Setup /v"/qb CWBPRIMARYLANG=MRI29xx"
```

(where 29xx is the language code)

- Note: on upgrade, primary language will be set to the previous release's primary, and cannot be changed

Agenda

- Install
- Communications
- PC5250
- Database clients
- Data Transfer
- .NET Provider
- OLE DB
- ODBC
- Operations Console
- Packaging and Licensing
- Appendix A: Supplemental Install Information
- ▶ **Appendix B: What's new in System i Navigator**

Management Central: Fixes Inventory

- Fixes inventory includes the following enhancements:
 - You can now have different levels of fix groups on your system.
 - The ability to send distribution requisites along with your prerequisites and co-requisites.
 - Additional statuses for fix groups allow you to better determine the status of your fix group.
 - You can compare and update fix groups as well as single systems.



Management Central: System Monitor

- You can view a 24 hour time window in your system monitor graph history window.



Management Central: Users and Groups

- Additional support is added to allow you to better manage users.
 - You can now prevent a user from changing a password immediately
 - Maximum number of Device session can be 1 through 9, or no limit.

Integrated File System: Enhancements

- Dynamic Mount Information has been added for Integrated File System
 - View the list of currently mounted file systems
 - View the name, mount type, and mounted directory of the file system
 - Unmount file systems at the same time or view the properties of a file system
 - Select a folder and then collect, display and analyze attribute information from the folder and its contents
 - Create a filter
 - Sort the information
 - Get a report of objects that are consuming more system storage

System i Navigator: Basic Operations

- A wizard to configure a new printer and associated objects is now available in System i Navigator.
- Printers can be deleted using System i Navigator.

Work Management

- Enhancements to Job Properties – General dialog:
 - Now includes Disk pool information for the library that contains the job description.
 - Now includes a new possible value for the Function field which indicates the user-specified function set with the Change Current Job(QWCCCJOB) API.
- Enhancements to Date/Time dialog:
 - Now includes Year offset and Day of week information.
 - The Year offset specifies the number of years that the current year in the calendar system used differs from the current Gregorian calendar year.
 - Day of week specifies the day of the week, which is determined by the job's current date and current time.

Work Management: Server and Job Queue

- Enhancements to Server:
 - The Server dialog now includes the client port number used by a server job.
- Enhancements to Job Queue:
 - The Job queue dialog now includes Disk pool information for the library that contains the job queue.

Configuration and Service: System Values

- New and updated system values:
 - Password Rules (QPWDRULES) gives you more control over the format of user passwords.
 - Password Expiration (QPWDCHGBLK) allows you to specify a time period that a user is blocked from changing a password.
 - Password Expiration Warning Interval (QPWDEXPWRN) specifies the number of days prior to a password expiring to begin displaying password expiration warning messages on the Sign-on Information display when a user signs on.
 - Protocols supported by System Secure Sockets layer (SSL) (QSSLPCL) specifies the SSL protocol versions supported by System SSL.

Configuration and Service: System Values

- System Values, Continued
 - Limit Device Sessions (QLMTDEVSSN) increases the range of concurrent device sessions that a user is limited to from 1 to 9
 - Cipher suite list specification options allow you to:
 1. Determine whether or not the SSL cipher suite list (which is the QSSLCSL system value) is controlled by the system or by the user (QSSLCSLCTL)
 2. View the cipher suites that are supported by System SSL when the list is controlled by the system
 3. Change the SSL cipher suite list if you have selected to have this list user-defined (QSSLCSL)

Configuration and Service: System Values

- System Values, Continued
 - New values have been added to the available actions when Activate action auditing is enabled(QAUDLVL/QAUDLVL2). The new options include Job base tasks and Job (thread level) profile changes
 - Year offset information is included on the Date tab if the value is non-zero
 - Leap year adjustment (QLEAPADJ) has been made a display-only value because it is no longer changeable

Configuration and Service: Time Management

- Several enhancements have been made this release to the Time Zones function:
 - Added support for Alternate name. This is a descriptive name that provides additional information about the time zone description.
 - Added the ability to change the Year offset for a time zone object. This is the number of years that the current year in the calendar system used with this time zone differs from the current Gregorian year.
 - Added the support to specify, in minutes, the amount of time for Daylight Saving Time shift when Daylight Saving Time has been enabled

Configuration and Service: Disk Units

- Enhancements to Disk Units:
 - Support for parity hot spares.

 - Support for cross site mirroring functions when High Availability Solutions Manager is installed.

 - Support for encrypted disk pools when the Encrypted ASP Enablement option is installed.

Configuration and Service: Tape Devices

- Enhancements to Tape Devices:
 - You can now create a virtual tape device using System i Navigator.

 - You can update the drive firmware for a stand-alone tape device.

 - On the Create Image Catalog - Options page, you can specify details about virtual volumes that you want added to the image catalog. On the Create Image Catalog, you can now specify the catalog ASP threshold.

 - On the Image Catalog Properties pages, you can specify the current directory for the image catalog, and whether to import the catalog and volume information from an image catalog directory. On the Image Catalog Properties pages, you can now specify the catalog ASP threshold.

 - Virtual volumes list now has a new column for Allocated size of the volume.

Network

- Many of the networking functions were updated to accept and use IPv6 information similar to how these functions use IP version 4 information. Thus, many of the networking wizards have new fields to enter IPv6 information.
- Operations Console is not IPv6 enabled

Database

- SQL performance monitors
 - In V6R1, a simplified compare tool was added to allow you to quickly compare monitors and see if further comparison is warranted. You can save your analyze results to a spreadsheet. Additionally, there are new filtering options available to further refine your monitoring selections.

Backup, Recovery, and Media Services (BRMS)

- New or enhanced BRMS items:
 - Encryption
 - Simplified Backup and Restore wizards
 - Media Policies (previously hidden)
 - More HTML reports
 - Media library manager (define which systems are attached to media libraries)
 - Copy Backup and Archive Control Groups (previously called Backup and Archive Policies) to other systems
 - New view for Backup Control Group and Archive Control Group Properties

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