

Getting to Know IBM i Access Client Solutions

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- IBM i Access Family
- Product Positioning
- Configuration
- 5250 Emulation
- Data Transfer
- Console
- Printer Output
- Shell Commands
- Break
- Deployment
- Database Enhancements
- Demonstration and Questions

IBM i Access Family



IBM i Access Family

- The r7.2 / r7.1 IBM i Access Family of Products
- IBM i Access for Windows (5770XE1)
 - Client Access
 - Most Mature and Widely used Product
 - System i Navigator
 - 5250 Display & Printer Emulator
 - Data Transfer
 - Operations Console & Virtual Control Panel
 - Data Access Providers
 - Remote Command
 - Print Drivers
- IBM i Access for Web / IBM i Mobile Access (5770XH2)
 - IBM i System Hosted HTML based Mobile Web Product
 - Robust Capability that has been Well Received
 - 5250 Interfaces
 - Print Access
 - Database Access
 - Integrated File System
 - Commands
 - Jobs
- IBM i Access for Linux (5770XL1)
 - Lightly Embraced Product specifically for Linux RPM Operating Systems
 - ODBC Provider
 - 5250 Display Emulator
 - Remote Command

Key features from legacy desktop products were included with the IBM i Access Client Solutions core offering

Access for Windows – Desktop

- 5250 display and printer emulator
- Data transfer
- Printer Output
- Operations Console
- System i Navigator
- Data drivers (ODBC, OLEDB, .Net)
- Printer drivers



Access for Linux – Desktop

- 5250 emulator
- ODBC driver
- A small subset of the IBM i Access components

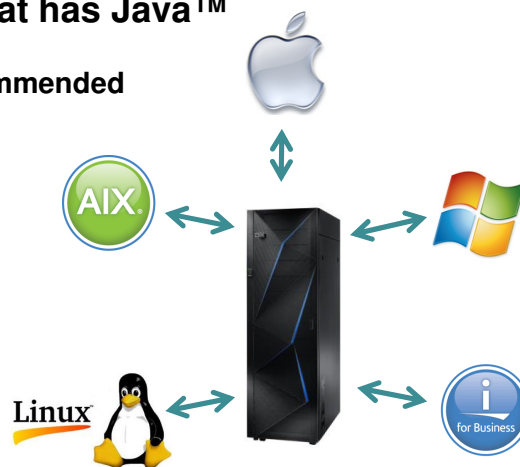


• **Runs anywhere that has Java™**

- Java 1.6 or later
 - Java 1.8 Recommended

• **This includes:**

- Windows
- Mac
- Linux
- AIX
- IBM i



Core offering (platform independent)

- 5250 display and printer emulator
- Data transfer
- Printer Output
- Console consolidation
- Other misc features

 **Windows Application Package (Available at G.A.)**

- Windows Installer MSI Package
- Data drivers (ODBC, OLEDB, .Net)
- Printer drivers

 **Linux Application Package (Available at G.A.)**

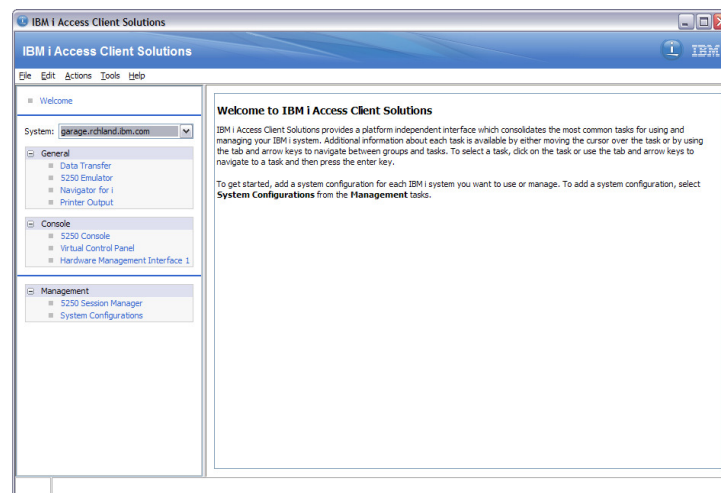
- RPM and Debian Install Packages
- ODBC driver



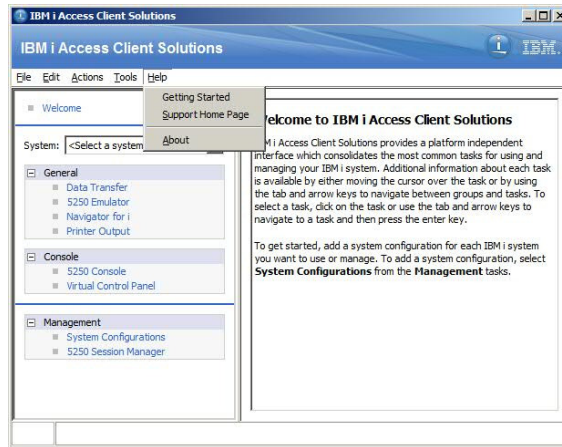
- IBM i Access Client Solutions is identified as LPP 5733-XJ1
 - Not an IBM i OS installable LPP
- The GA version of the product is available to customers with valid SWMA and IBM i OS r6.1, r7.1 or r7.2 and is downloaded from the IBM i Access Client Solutions or IBM Entitled Software Support (ESS) websites
 - Technote with example instructions
 - <http://www-01.ibm.com/support/docview.wss?uid=nas8N1010355>
- Product distributed in zip files
 - Platform Independent Core Java product
 - From IBM i ACS website: IBMiAccess_v1r1.zip
 - On ESS: IBM_i_Access_Client_Solutions_LCD#_*.zip
 - Contains product jar and other supporting files
 - Windows Application Package
 - IBM_i_Access_Client_Solutions_-_Win_AP_LCD#_*.zip
 - Contains 32bit and 64bit Windows installers
 - Linux Application Package
 - IBM_i_Access_Client_Solutions_-_Linux_AP_LCD#_*.zip
 - Contains Linux RPM and Debian installers

- Supported connecting to IBM i OS r7.2, r7.1 and r6.1
- IBM i OS supports IBM i Access Client Solutions exactly the same as IBM i Access for Windows
 - Checks out the same 57xxXW1 Licenses for 5250 and Data Transfer
 - Connects to the same IBM i Access Host Servers on the same ports in the same way
 - Exit programs will continue to have the same impact
 - Application Administration local policies will still be applied

- Provide an easy to use launch point for features



- Product contains Documentation folder containing "QuickStartGuide" and "GettingStarted" documents
- "GettingStarted" can also be launched from Main User Interface



Product Positioning



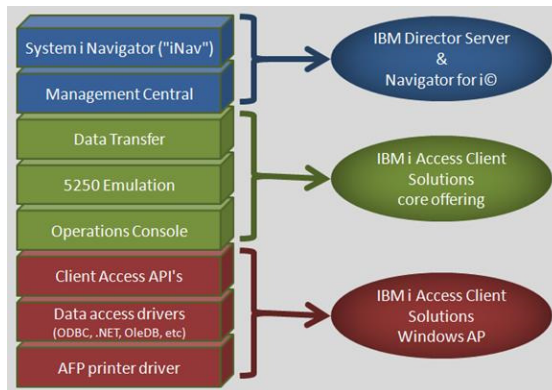
- IBM i Access Client Solutions is comprised of 3 separate packages



- Instead of updating (Linux) or creating (Mac OS) platform specific products a strategic decision was made to instead take the core functions of IBM i Access for Windows and bring them into a new platform independent product
 - Significantly reduces administration costs by elimination platform specific installer and supporting simple network drive deployment for most users
 - The need to still address functions that are platform specific are addressed with the Windows and Linux Application Packages

- IBM i Access for Windows or Client Access has been the platform for nearly everything needed to interact with your IBM i OS for a long time. From end users just needing a 5250 session, to a System Administrator, the same product and maintenance overhead is needed
- Many of these functions are now available in different ways depending on the needs of the user or application environment.

- Access for Windows major functions and where those functions are provided

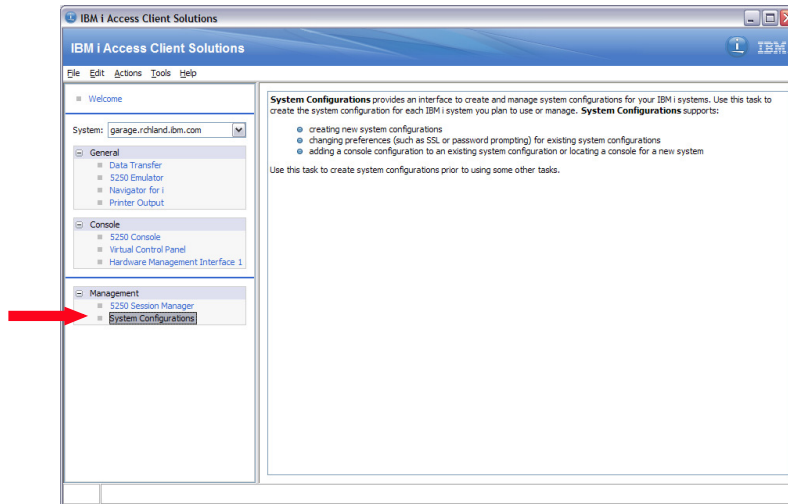


- IBM i Access Client Solutions Application Packages are built using the exact same infrastructure as the IBM i Access for Windows and IBM i Access for Linux products. Therefore they are mutually exclusive.
- The IBM i Access Client Solutions core platform independent product has no conflicts with either of the Linux or Windows packages.
- IBM i Access Client Solutions does not provide any Navigator interface instead relying on the IBM Navigator for i web based infrastructure that was introduced with IBM i OS r6.1 and has continually been enhanced since
 - Name change from IBM Systems Director Navigator to IBM Navigator for i indicates a very large investment into improving the performance and usability of this interface
 - Key IBM i OS solutions like Performance Data Investigator and HAS tools are only available in Navigator for i
 - r7.2 GA timeframe introduces monitors and PTF interaction
 - A few things have/had reliance System i Navigator
 - Run SQL Scripts (NOT Anymore, Delivered in December 2015)
 - Database Visual Explain (Expected around July 2016)

Configuration

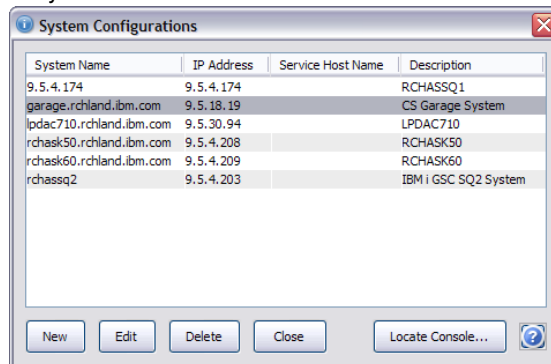


- Use the System Configurations panel to store connection information on the IBM i Systems that will be used

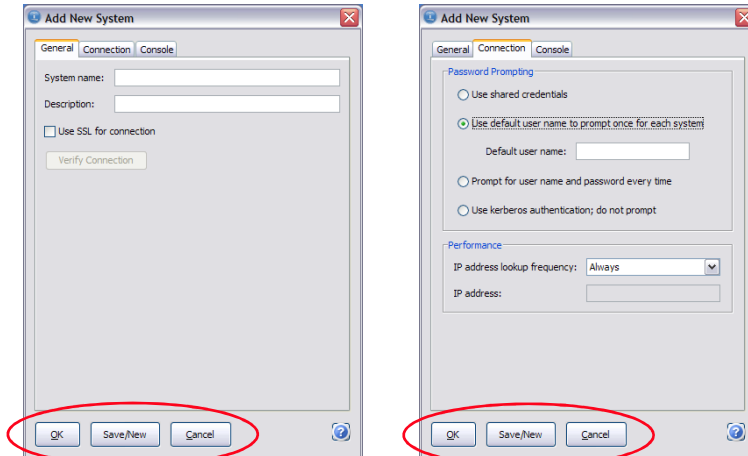


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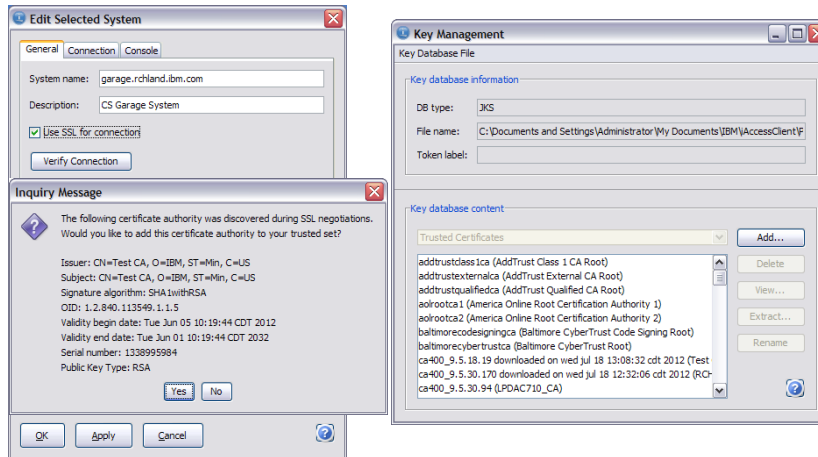
- Create, Edit or Delete connection information for IBM i Systems that are used.
 - System Name: What is entered by the user to connect to this host
 - IP Address: What the PC's DNS environment last returned when connecting to the System Name
 - Service Host Name: The System's Console host name or IP address as configured
 - Description: Defined by the user when created



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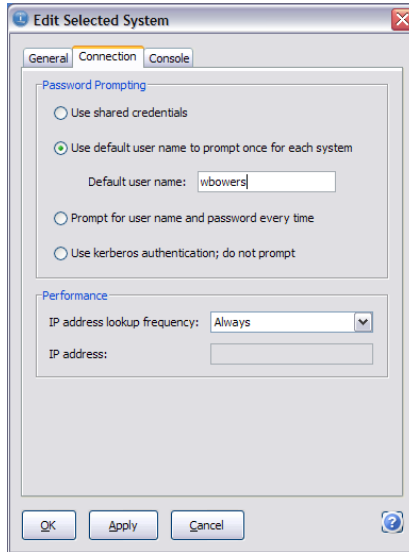


- OK - Saves the information entered and closes the panel
- Save/New - Saves the information entered and clears the panel
- Cancel - Closes the panel without saving anything



- Use SSL specifies that the connection will be secured
- If the Certificate Authority negotiated is not trusted, the user will be prompted to add to trusted list
- There still is a Key Management utility if needed

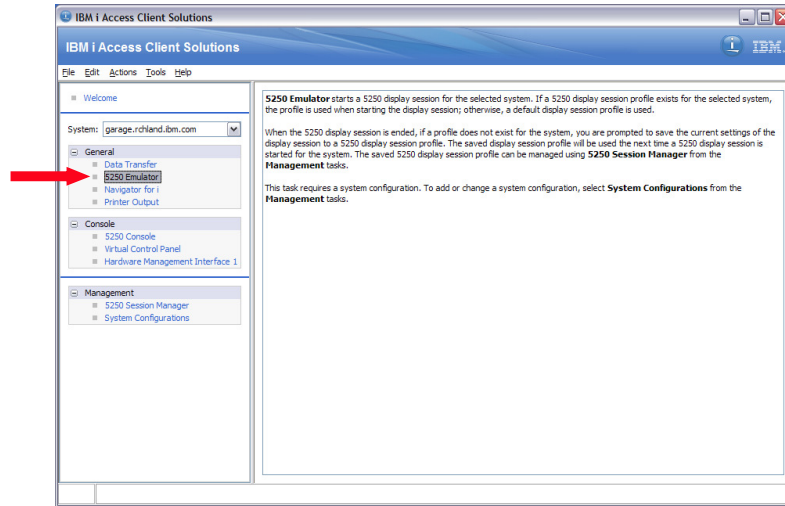
- Use default user name to prompt once for each system
 - Caches credentials for duration of desktop session
- Prompt for user name and password every time
- Use Shared credentials
 - First time for desktop session that a connection is made to a System configuration using this option the user will be prompted to provide User name & Password
 - These credentials will be cached for use by all System configurations set to this option
- Use kerberos authentication; do not prompt
 - No further IBM i Access Client Solutions configuration needed



5250 Emulation

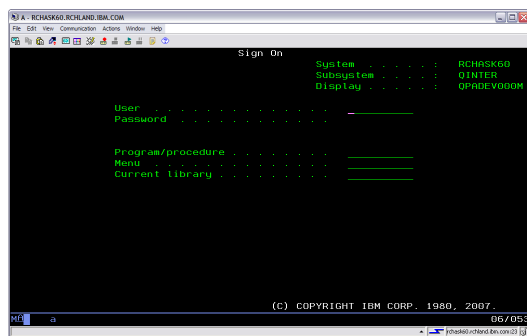


- Opens an IBM Rational Host On Demand 5250 Telnet session to the current System



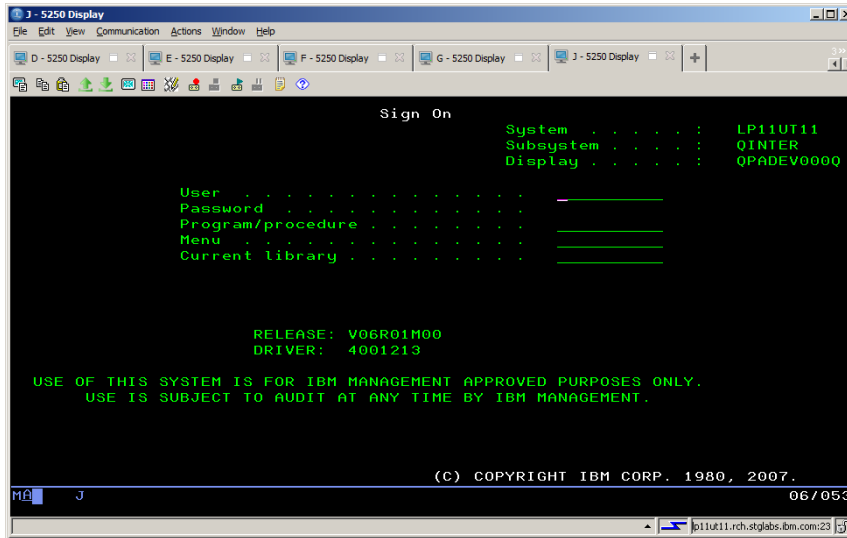
- Provides nearly identical interaction, look and feel to the Access for Windows PC5250 emulator
 - Keyboard Mapping
 - Keystroke Macros
 - Edit Colors
 - Toolbar Customization
 - Pop-Up keypad
 - Window Setup
 - Hotspots
 - Printer Emulation

- Also some New features
 - Tabbed Sessions
 - Mouse Wheel
 - Simplified Codepage
 - Screen History
 - Watermarks
 - Default Session

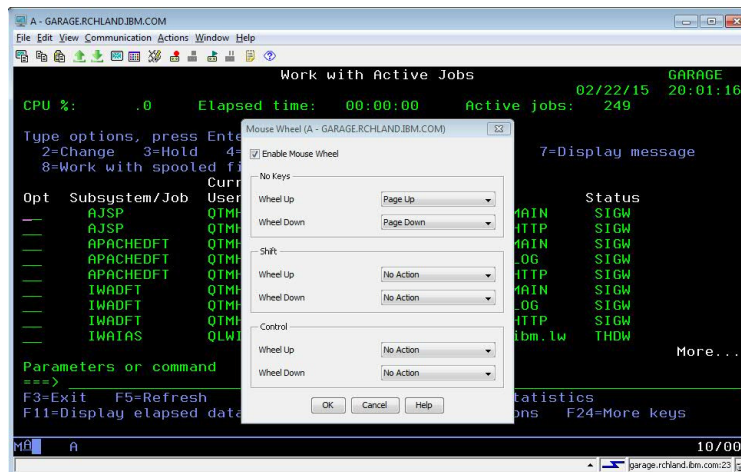


- Immediately Following - Session "My Emulator is Better than Yours"

• **Tabbed Session support added in V1R1M4**



- Allows the use of the Mouse Wheel to perform 5250 Aid Key Functions - Defaults to Page Up/Down
 - Shift and Control options added in V1R1M4 and default to 'No Action'



Work with System Status LP11UT11 09/17/12 12:34:43

```

% CPU used . . . . . : .8
% DB capability . . . . . : .0
Elapsed time . . . . . : 00:00:01
Jobs in system . . . . . : 36877
% perm addresses . . . . . : .033
% temp addresses . . . . . : .541
Auxiliary storage: 09/17/12 12:34:43
System ASP . . . . . : 705.6 G
% system ASP used . . . . . : 30.9656
Total . . . . . : 705.6 G
Current unprotect used : 7016 M
Maximum unprotect . . . : 7061 M
    
```

Type changes (if allowed), press Enter.

System Pool	Pool Size (M)	Reserved Size (M)	Active	----DB----	---Non-DB---
				Fault	Pages
1	1500.00	190.03	+++++	.0	.0
2	7360.12	9.92	32767	.0	.0
3	1000.00	.00	32767	.0	7.2
4	250.00	.00	32767	.0	.0

Command ==>

F3=Exit F4=Prompt F5=Refresh F9=Retrieve F10=Restart F12=Cancel
 F19=Extended system status F24=More keys

14/010

Screen History Board

Work with Active Jobs GARAGE 02/22/15 20:52:55

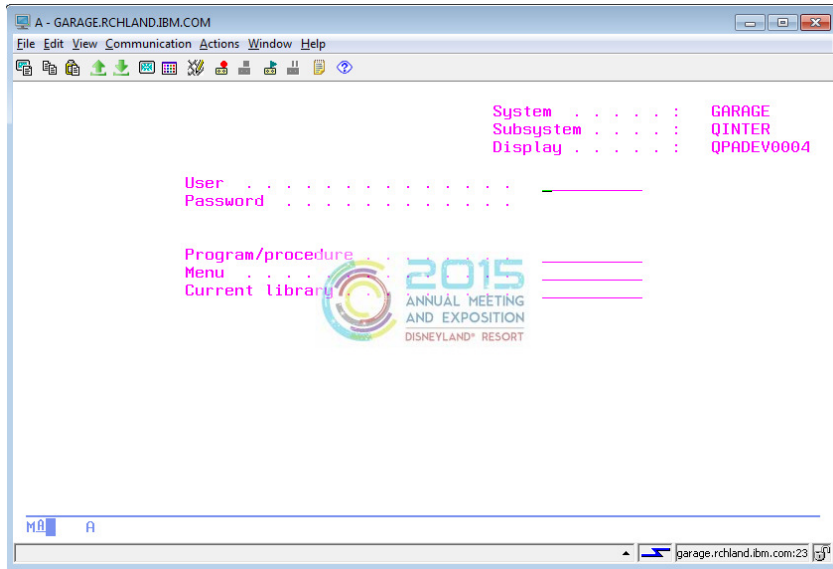
```

CPU % Elapsed time 00:00:00 Active jobs 249
Type options, press enter.
2=Change 3=Hold 4=End 5=Work with 6=Release 7=Display message
8=Work with spooled files 13=Disconnect ...
Current
Opt Subsystem/Job User Type CPU % Function Status
---
AJSR QTMHHTTP BCH .0 PGM-QZHBMAIN SIGW
AJSR QTMHHTTP BCI .0 PGM-QZSRHTTP SIGW
APACHEDEF QTMHHTTP BCH .0 PGM-QZBMAIN SIGW
APACHEDEF QTMHHTTP BCI .0 PGM-QZSRLOG SIGW
APACHEDEF QTMHHTTP BCI .0 PGM-QZSRHTTP SIGW
IWADFT QTMHHTTP BCH .0 PGM-QZHBMAIN SIGW
IWADFT QTMHHTTP BCI .0 PGM-QZSRLOG SIGW
IWADFT QTMHHTTP BCI .0 PGM-QZSRHTTP SIGW
IWAIAS QLWJSVR BCI .0 JVM-com.ibm.lw THDW
    
```

Parameters command

F3=Exit F5=Refresh F7=Find F10=Restart statistics
 F11=Display elapsed data F12=Cancel F23=More options F24=More keys

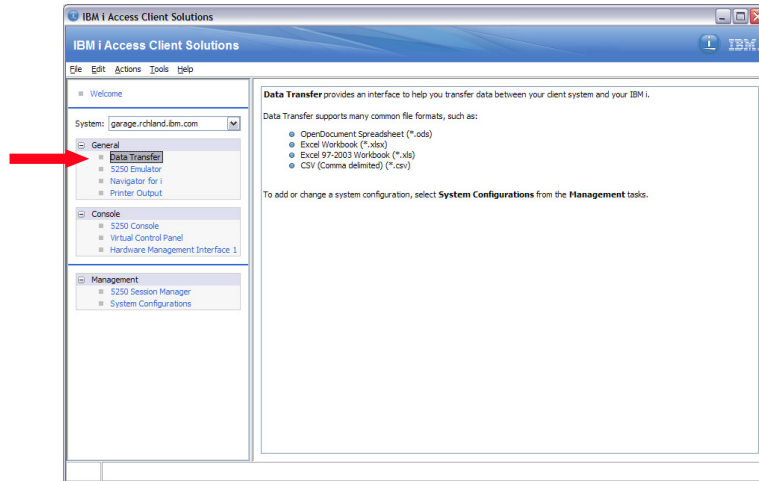
10/002



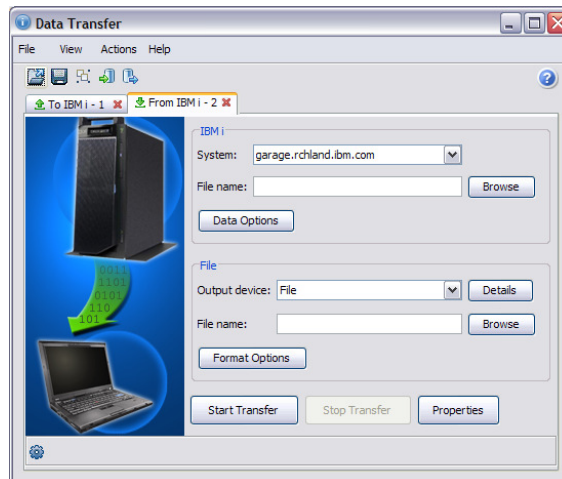
Data Transfer



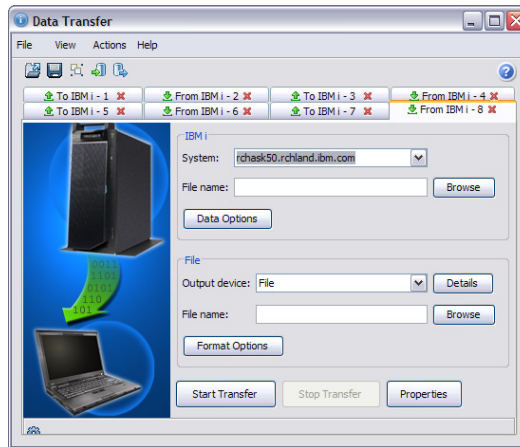
- Select the Data Transfer option
 - Will default to the current System



- Displays the Data Transfer interaction panel
 - Starts out with a Data Transfer to IBM i and Data Transfer from IBM i tab to the current System on the main panel

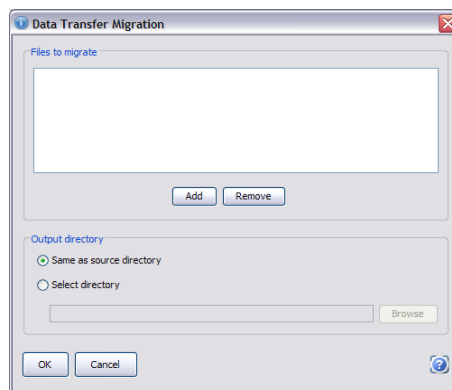


- Data Transfer interaction panel
 - All active Data Transfer requests are displayed in a tab on this panel
 - Open Saved Requests
 - Save Requests
 - Create IBM i Files
 - Data Transfer Migration



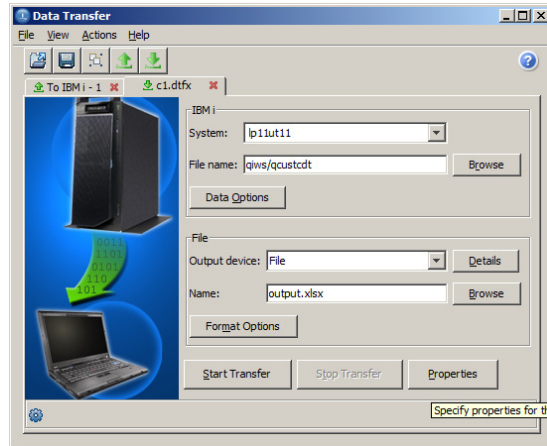
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- Access for Windows Data Transfer saved request migration
 - Migrate saved .dtf and .dtf files to IBM i Access Client Solutions .dtx and .dtx files

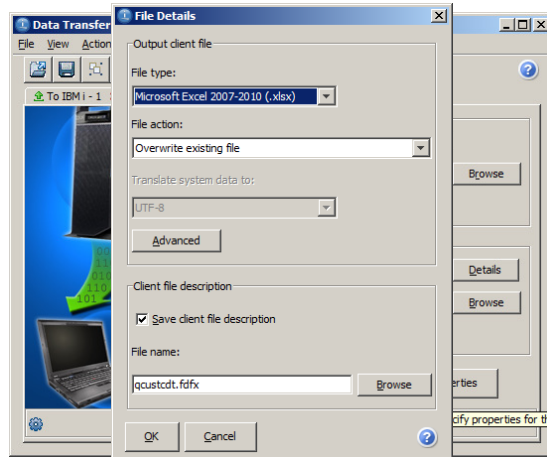




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Creating a request to run on the i

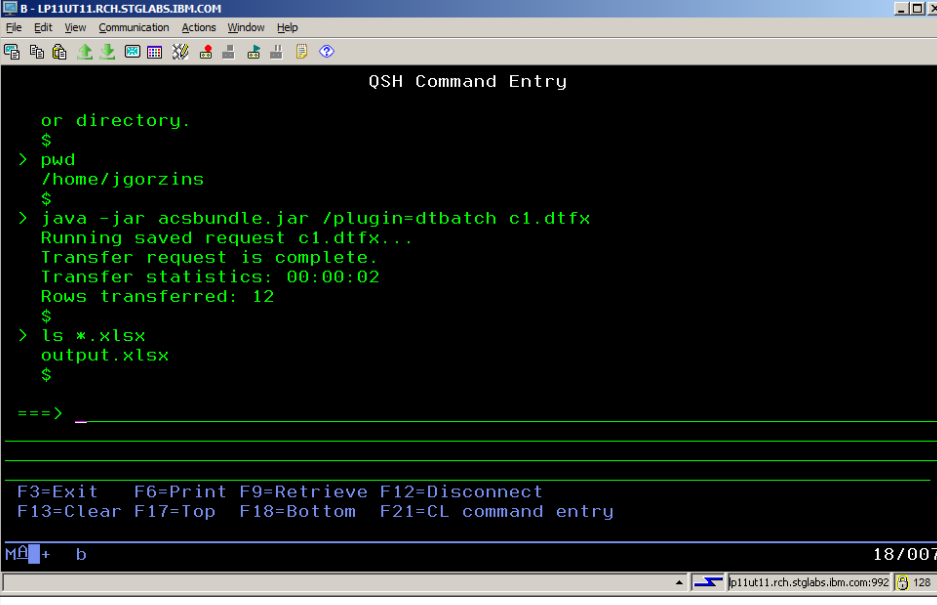


Creating a request to run on the i



Power Systems  

Creating a request to run on the i



```

or directory.
$
> pwd
/home/jgorzins
$
> java -jar acsbundle.jar /plugin-dtbatch c1.dtfx
Running saved request c1.dtfx...
Transfer request is complete.
Transfer statistics: 00:00:02
Rows transferred: 12
$
> ls *.xlsx
output.xlsx
$



===>

```

F3=Exit F6=Print F9=Retrieve F12=Disconnect
F13=Clear F17=Top F18=Bottom F21=CL command entry

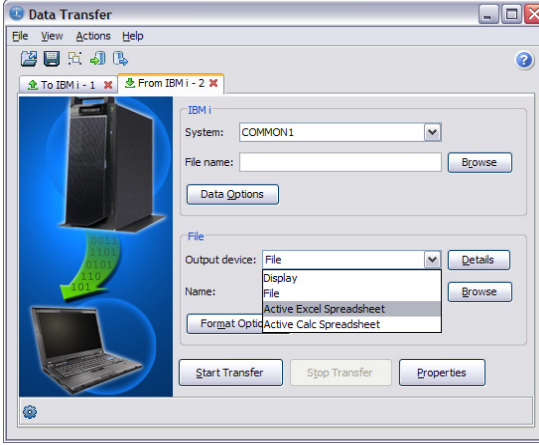
18/007

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Power Systems  

Data Transfer to Active Spreadsheet

- Data Transfer mechanism to interact directly with spreadsheet
 - On a Data Transfer From IBM i Select "Active Excel Spreadsheet" for the output device.
 - Data Options can be used to modify query



The screenshot shows the 'Data Transfer' dialog box with the following settings:

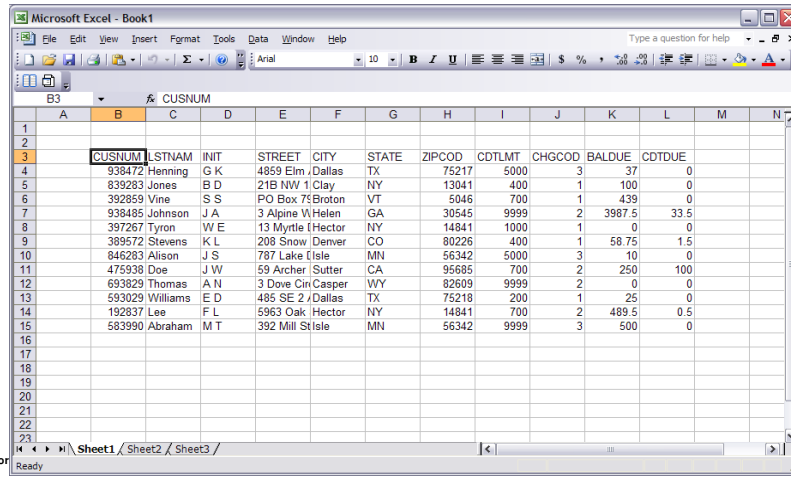
- System: COMMON1
- File name: (empty)
- Output device: File
- Name: Active Excel Spreadsheet

Buttons: Start Transfer, Stop Transfer, Properties, Data Options, Details, Browse.

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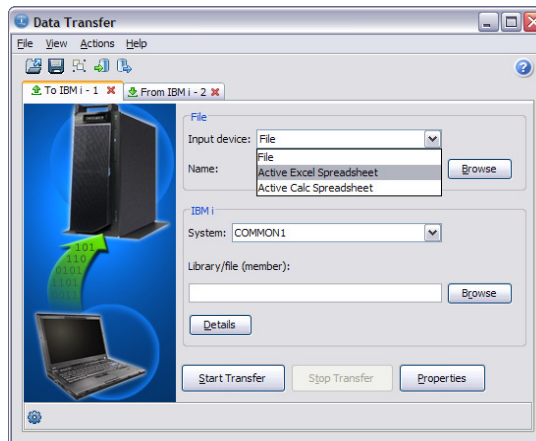
Data Transfer to Active Spreadsheet

- Data Transfer mechanism to interact directly with spreadsheet
 - The results of the data transfer are placed into the active Excel spreadsheet book at the currently selected cell.



Data Transfer from Active Spreadsheet

- Data Transfer mechanism to interact directly with spreadsheet
 - On a Data Transfer to IBM i Select “Active Excel Spreadsheet” for the Input device.
 - The selection from the Excel Spreadsheet will be uploaded to the file on the IBM i



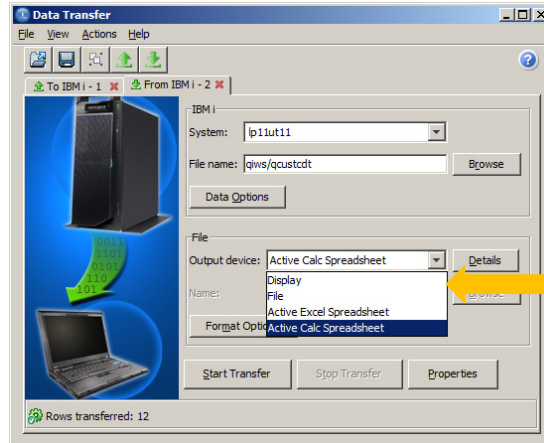
Data Transfer with Active Spreadsheet

- Support:
 - Microsoft Excel
 - Windows
 - OpenOffice Calc
 - Windows
 - Linux

Data Transfer with Active Spreadsheet -- Usage tips

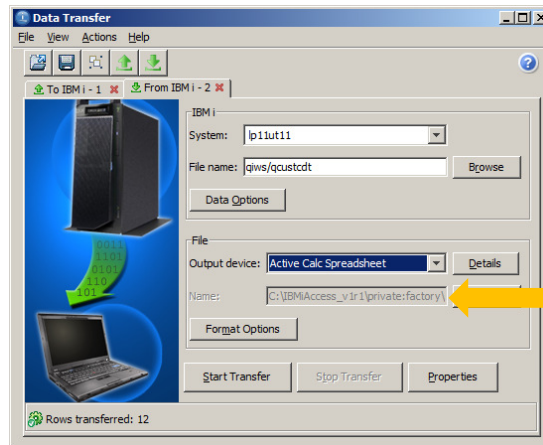
- Bitness must match!!! (32bit vs. 64bit)
- ACS will "activate" the connection and attach at the moment the dropdown item is selected!
- Select target/source location in spreadsheet before activation
(for upload, select the range)

Data Transfer with Active Spreadsheet -- Usage tips



At the moment this is selected, the connection is activated.

Data Transfer with Active Spreadsheet -- Usage tips



"Name" field shows the workbook it attached to

Data Transfer with Active Spreadsheet -- Usage tips

File Details

- Create extra sheets when first sheet overflows
- Column titles:
 - None
 - Column names
 - Column headings
- Include column titles on extra sheets
- Specify a starting position
- Starting position:
 - Sheet:
 - Column: Row:
- Client file description:
 - Save client file description
 - File name:

"Details" button to see the specific sheet and starting cell
In this example, Sheet 2, cell E14

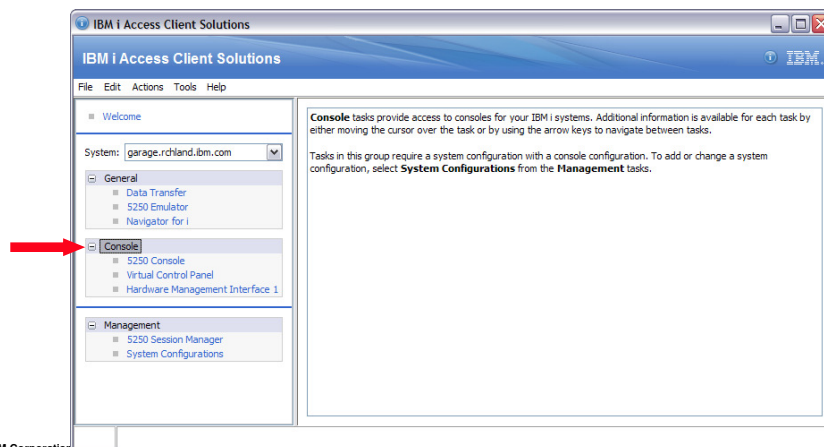
CUSNUM	STNAM	INIT	STREET	CITY	STATE	ZIPCOD	CDTLMT	CHGCOO	BALDUE	CDTDUE
938472	Henning	G K	4859 Elm Av	Dallas	TX	75217	5000	3	37	0
839283	Jones	B D	218 NW 135	Clay	NY	13041	400	1	100	0
392859	Vine	S S	PO Box 79	Bristol	VT	5046	700	1	439	0
938485	Johnson	J A	3 Alpine Way	Helen	GA	30545	9999	2	3987.5	33.5
397267	Tyton	W E	13 Myrtle Dr	Hector	NY	14841	1000	1	0	0
389572	Stevens	K L	208 Snow Pk	Denver	CO	80226	400	1	58.75	1.5
846283	Alison	J S	787 Lake Dr	Isle	MN	56342	5000	3	10	0
475538	Doe	J W	59 Archer Rd	Sutton	CA	95685	700	2	250	100
693829	Thomas	A N	3 Dowd Circle	Casper	WY	82609	9999	2	0	0
593029	Williams	E D	485 SE 2 Av	Dallas	TX	75218	200	1	25	0
192837	Lee	F L	5963 Oak St	Hector	NY	14841	700	2	489.5	0.5
583990	Abraham	M T	392 Mill St	Isle	MN	56342	9999	3	500	0

Console

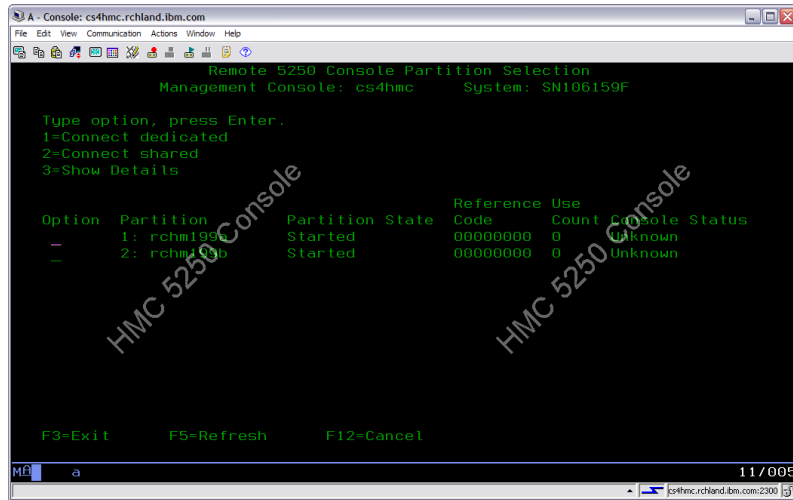


Console

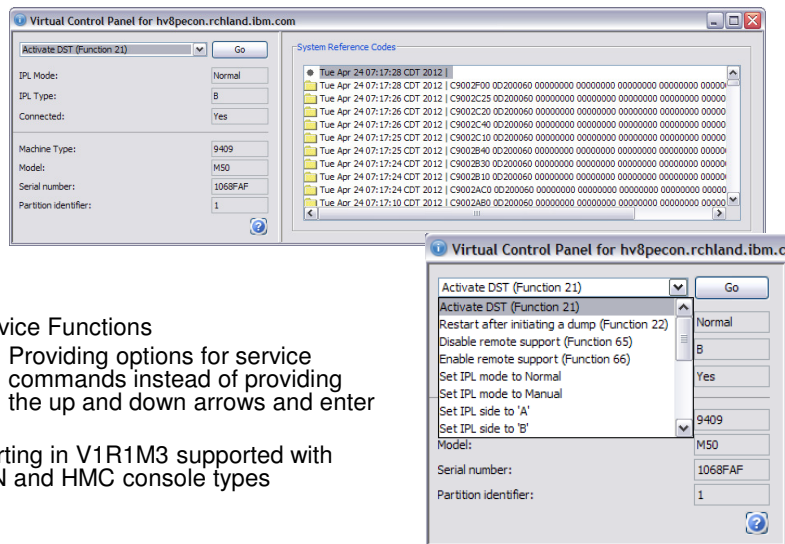
- 5250 Console – Opens a interactive console to the current System
- Virtual Control Panel – Opens a Virtual Control Panel
- Hardware Management Interface 1 – Opens a web browser to the management console specified for the current System



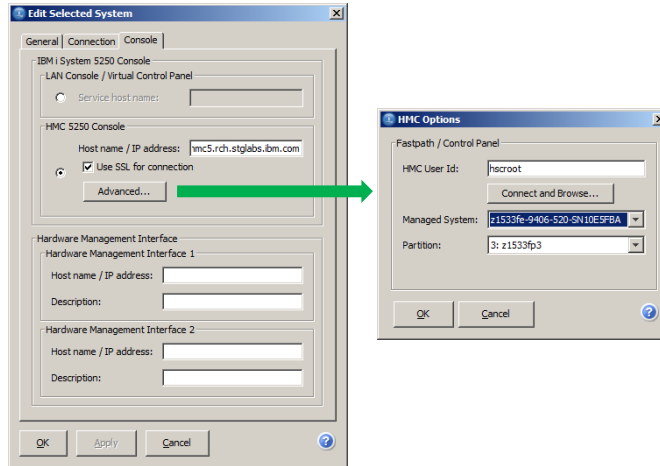
- 5250 HMC Console



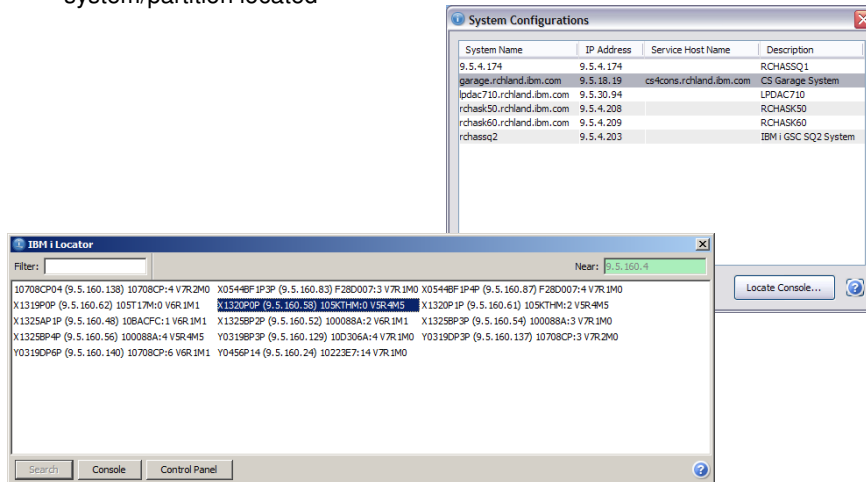
- Virtual Control Panel



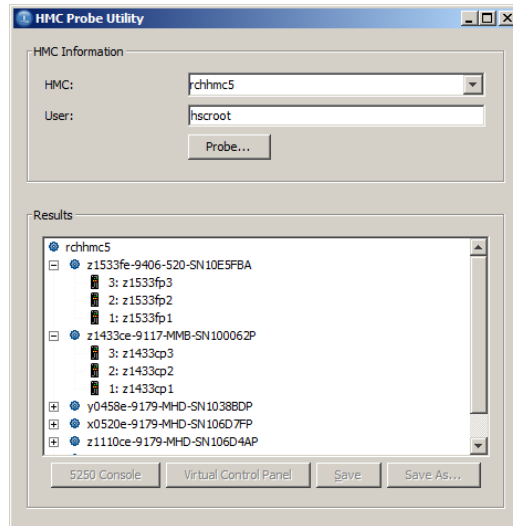
- Service Functions
 - Providing options for service commands instead of providing the up and down arrows and enter
- Starting in V1R1M3 supported with LAN and HMC console types



- Listens on your LAN for discovery data packets from systems with LAN Console configured
- Dynamically open a 5250 Console or Virtual Control Panel to the system/partition located



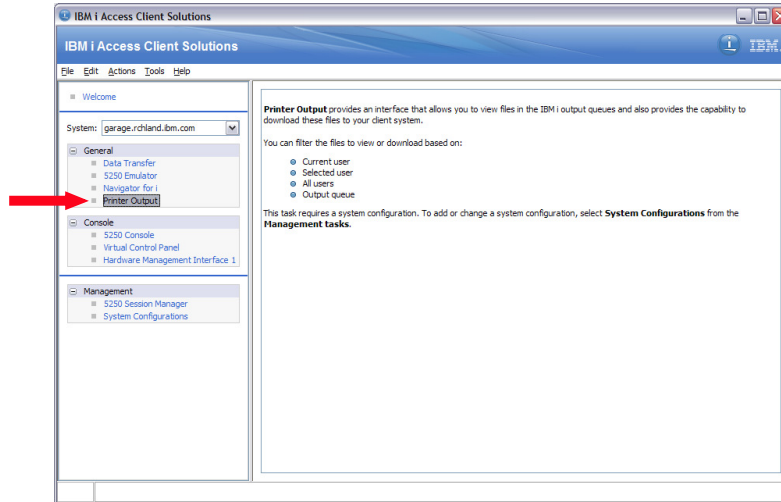
- Probes an HMC for managed systems & partitions



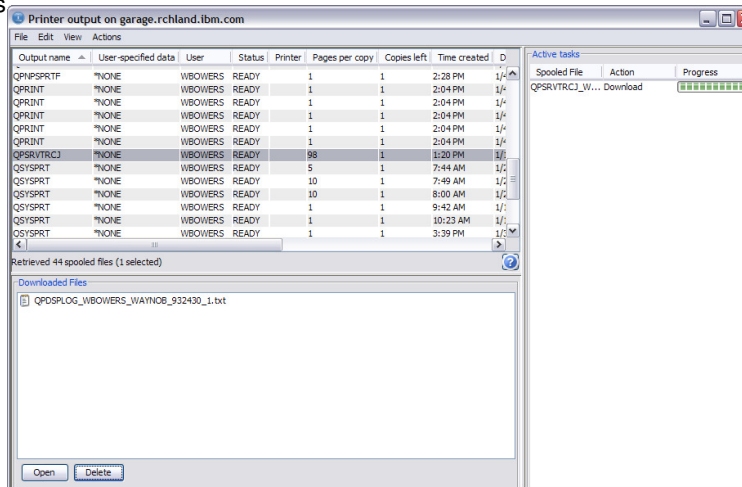
Printer Output



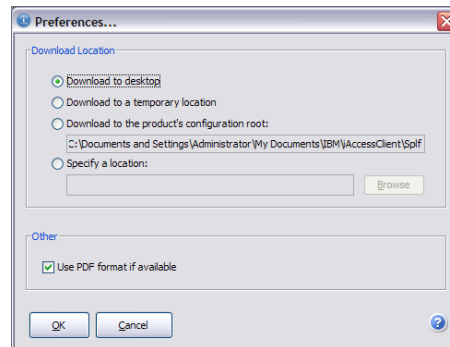
- Lists and allows interaction with the printer output on the IBM i OS System



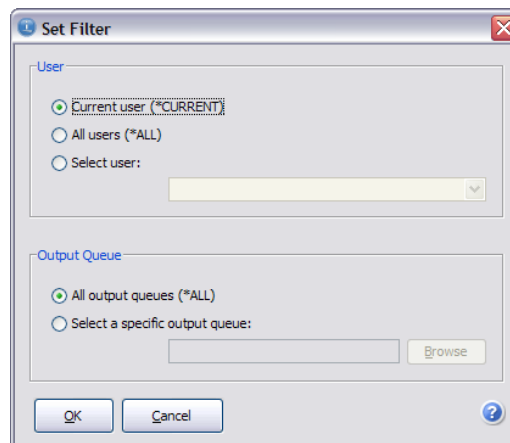
- Printer Output user interface
 - Allows the user to view, and download spooled files



- Edit -> Preferences
 - Download location
 - Where the downloaded file will be stored on the local workstation
 - Other
 - Determines if the printed output should be downloaded in PDF format if available
 - Requires IBM i OS r7.1 or later with the IBM Transform Services for i (5770TS1) product installed
 - If this is unchecked a .txt file will be generated



- View -> Set Filter
 - Allows the user to specify how the list of printed output is generated.
 - Either the User, Output Queue or both filters may be modified.



Shell Commands



Shell Commands

- IBM i Access Client Solutions provides several shell or command line utilities that can be used outside of the graphical user interfaces
- Basic syntax is (all on the same line)

```
acslaunch_win-32.exe /plugin=<name>  
[/system=<system>] [/options]
```

– Or

```
java -jar acsbundle.jar /plugin=<name>  
[/system=<system>] [/options]
```

- The “/system” parm is only valid for commands pointed at a specific system

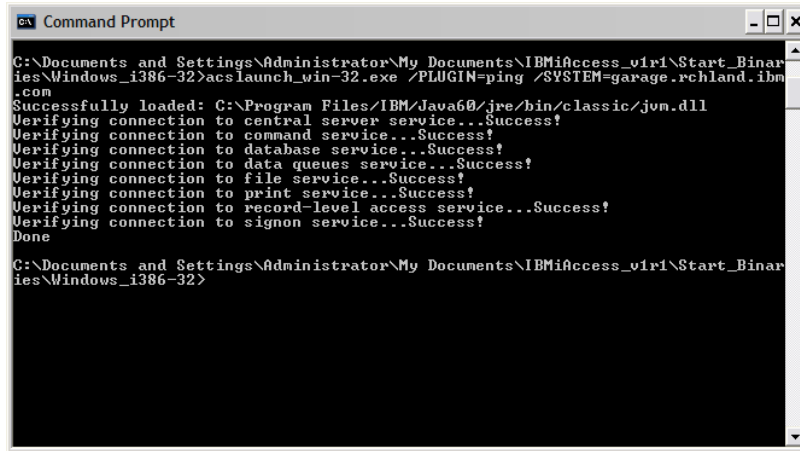
- Examples include:

- Backup
 - Saves the client configuration to file
- Restore
 - Restores the client configuration from file
- Cfg
 - Creates system configuration
- Dump
 - Requests all running client processes to write service information
- Medic
 - Packages the existing logs and dumps
- Log
 - Sets the client logging level

- And...

- Logon
 - Manages user id and password caching
- Props
 - Opens the Edit -> Preferences panel
- Maint
 - Maintenance options
- Ping
 - IBM i Access Client Solutions connection verification
- Sm
 - Opens 5250 session manager
- 5250
 - Opens 5250 display session
- DTGui
 - Opens Data Transfer interaction panel

- Shell Command Ping example



```
Command Prompt
C:\Documents and Settings\Administrator\My Documents\IBMiAccess_v1r1\Start_Binaries\Windows_i386-32>acs launch_win-32.exe /PLUGIN=ping /SYSTEM=garage.rchland.ibm.com
Successfully loaded: C:\Program Files\IBM\Java600\jre/bin/classic/jvm.dll
Verifying connection to central server service...Success!
Verifying connection to command service...Success!
Verifying connection to database service...Success!
Verifying connection to data queues service...Success!
Verifying connection to file service...Success!
Verifying connection to print service...Success!
Verifying connection to record-level access service...Success!
Verifying connection to signon service...Success!
Done
C:\Documents and Settings\Administrator\My Documents\IBMiAccess_v1r1\Start_Binaries\Windows_i386-32>
```

Break



Deployment



Deployment

- IBM i Access Client Solutions is not installed to the client operating system, it is deployed.
 - There is no Windows Based Installer (setup.exe) installation program for the core of the product.
- Access Client Solutions Deployment
 - The deployment involves the client bundle being placed wherever it is desired to be executed from, and determining where the product settings are going to be stored.
- Client Bundle
 - Contains the Java executable Jar, properties file, platform specific start executables and javascript start samples, product documentation, and licensing notices.
 - All that is required to be deployed is the Java executable Jar
 - The rest is optional
- No JRE distributed
 - IBM i Access Client Solutions does not deploy a specific JRE
 - Relies on a Java 1.6 or higher JRE to be accessible on the client OS

- When thinking about deployment, ask yourself where you want to put:

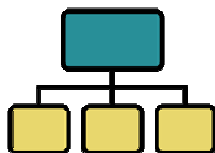
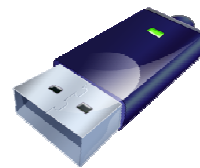
1. the product image? (jar file)

**2. the user's settings?
(system configurations,
5250 sessions, etc.)**

Computer (local)



USB Thumb Drive



Network Share



Intranet (<http://> URL)

Where can I put the image (jar file)?

**Any filesystem (local, USB drive, network)
or
Intranet link (http:// or https://)**

**NOTE: A Java Runtime Environment (JRE) will also
need to be accessible**

Where can I put the user's settings?

Any filesystem (local, USB drive, network)

- For filesystem locations, simply copy the file(s) and give users access
- For http:// or https://, you have two options:

- Static-serving the file from your web server

Simply have your web server “serve” the file via a static link or some similar mechanism

(requires the user to have file association for .jar, and for that association to launch a Java 6 JRE)

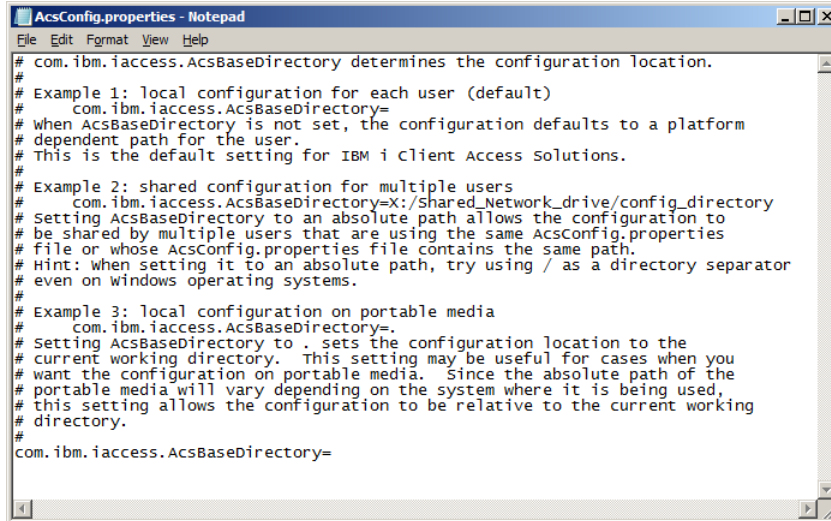
- Using Java WebStart technology

Only requires the user to have some Java installed (does not have to be Java 6)

AcsConfig.properties

- This can be configured in the product configuration file, named “AcsConfig.properties”
- AcsConfig.properties is simply a list of configuration properties and values.
- These properties may also be specified on the command line
-D<property>=<value>
- One such property is

com.ibm.iaccess.AcsBaseDirectory



```
com.ibm.iaccess.AcsBaseDirectory determines the configuration location.
#
# Example 1: local configuration for each user (default)
#   com.ibm.iaccess.AcsBaseDirectory=
# when AcsBaseDirectory is not set, the configuration defaults to a platform
# dependent path for the user.
# This is the default setting for IBM i Client Access Solutions.
#
# Example 2: shared configuration for multiple users
#   com.ibm.iaccess.AcsBaseDirectory=X:/shared_network_drive/config_directory
# setting AcsBaseDirectory to an absolute path allows the configuration to
# be shared by multiple users that are using the same AcsConfig.properties
# file or whose AcsConfig.properties file contains the same path.
# Hint: when setting it to an absolute path, try using / as a directory separator
# even on windows operating systems.
#
# Example 3: local configuration on portable media
#   com.ibm.iaccess.AcsBaseDirectory=.
# Setting AcsBaseDirectory to . sets the configuration location to the
# current working directory. This setting may be useful for cases when you
# want the configuration on portable media. Since the absolute path of the
# portable media will vary depending on the system where it is being used,
# this setting allows the configuration to be relative to the current working
# directory.
#
com.ibm.iaccess.AcsBaseDirectory=
```

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- The following locations are searched for the AcsConfig.properties file:
 1. In the classpath (that is, inside acsbundle.jar)

Sample, default version included with the product
 2. In the same directory as acsbundle.jar

Sample, default version included with the product
 3. By interrogating the “ibmi.acs.configuration” Java System property (the property’s value is assumed to be the properties file). One would set this property on the command line. Example:

```
acs1aunch_win-32.exe -
Dibmi.acs.configuration=M:\AcsConfig.properties
```

- **IMPORTANT NOTE!!** When the configuration file exists in multiple locations, the last one wins

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- The value of this property determines:
 - The location of user settings
 - The location of service logs/dumps/etc
 - The default directory used by the 5250 session manager (this can be configured separately if desired)
- The value is expected, therefore, to be a directory name on a filesystem. It can be
 - Left blank (which leaves behavior at the default location)
 - The path of a hardcoded directory name (fully-qualified is highly recommended)
 - A constructed path using special keywords (next slide)



Tip: use forward slashes ('/'), not backslashes ('\')

- `{USER}` : would be the current username (valid anywhere in the path)
- `{PRODUCTDIR}` : would mean the product's location in the file system (valid only at the beginning)
- `{TEMPDIR}` : would be the temporary directory (valid only at the beginning)
- `{ROOT}` : the root of the file system where the product is located (valid only at the beginning)
- `{CWD}` : the current working directory (valid only at the beginning)
- `{HOME}` : the user's home directory (valid only at the beginning)
- `{DEFAULT}` : the default place the product normally puts its settings (valid only at the beginning)

POP QUIZ

You have deployed the ACS jar file on a network share. Most users map this share as "M:" (Linux users have mounted it as /mnt/shr1).

You want user settings to also be stored on the network share. You also want each user's settings to be saved in its own location.

Is this even possible?

- a) Yes
- b) No

POP QUIZ

You have deployed the ACS jar file on a network share. Most users map this share as "M:" (Linux users have mounted it as /mnt/shr1).

You want user settings to also be stored on the network share. You also want each user's settings to be saved in its own location.

Is this even possible?

- a) Yes

POP QUIZ

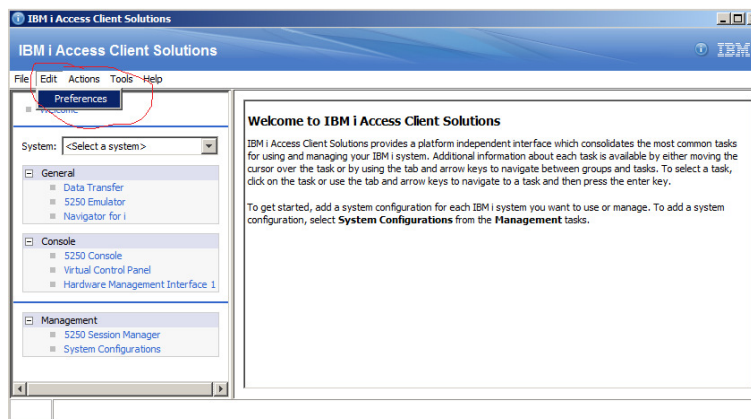
You have deployed the ACS jar file on a network share. Most users map this share as "M:" (Linux users have mounted it as /mnt/shr1).

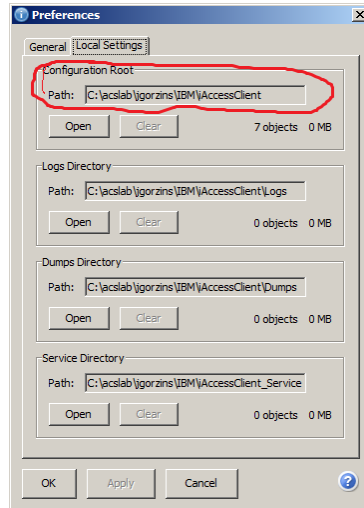
You want user settings to also be stored on the network share. You also want each user's settings to be saved in its own location.

What would be an acceptable value for com.ibm.iaccess.AcsBaseDirectory?

- d) `{ROOT}/ACS/{USER}`
- f) `{PRODUCTDIR}/ACS/{USER}`

Verifying location





Default ("My Documents" on Windows, home dir otherwise)

```
com.ibm.iaccess.AcsBaseDirectory=
```

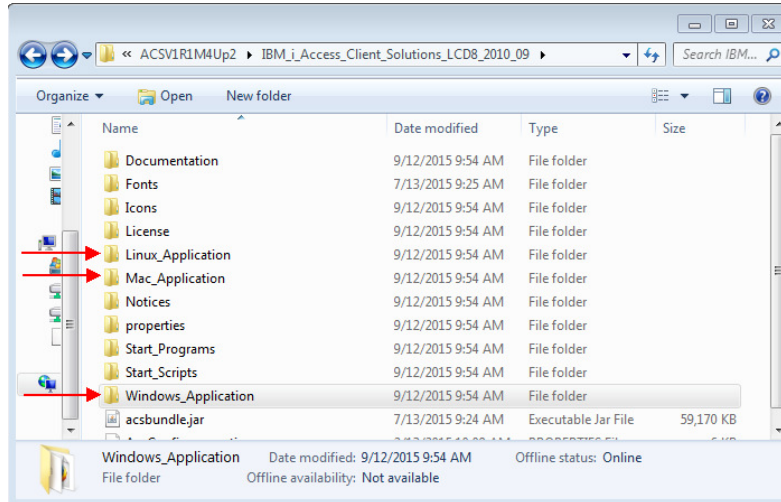
Network share

```
com.ibm.iaccess.AcsBaseDirectory={ROOT}/config_directory/{USER}  
com.ibm.iaccess.AcsBaseDirectory={PRODUCTDIR}/config_directory/{USER}
```

Thumb drive!

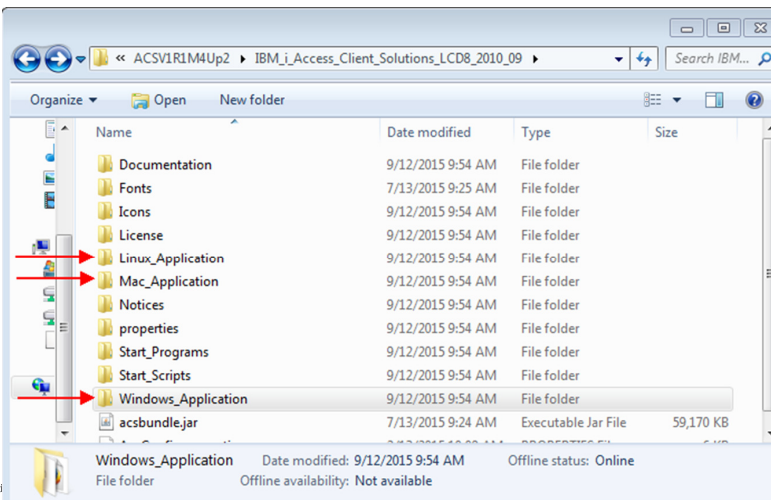
```
com.ibm.iaccess.AcsBaseDirectory={PRODUCTDIR}/config_directory
```

- IBM i Access Client Solutions v1r1m4 provided Operating System specific Application deployment scripts to make deployment easier for an user



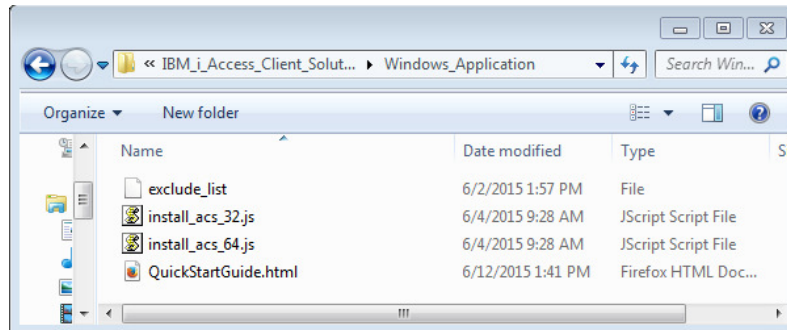
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- Provided Javascript will copy the IBM i Access Client Solutions deployment to a specific location that makes sense for the Operating System being used.



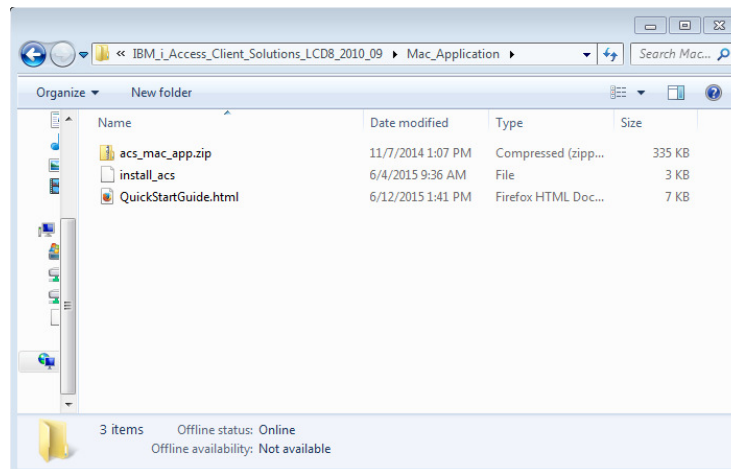
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- Provided install_acs Javascript on Windows will copy the IBM i Access Client Solutions deployment to C:\Users\<WindowsUser>\IBM\ClientSolutions and will create shortcuts on the Desktop for the Main User Interface and 5250 Session Manager. It will also create file associations for the .hod, .bchx, .dttx & .dtfx if they haven't already been created.



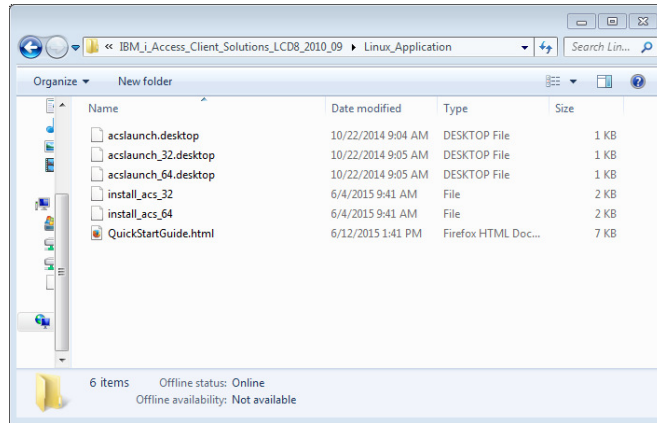
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- Provided install_acs Javascript on Mac will copy the IBM i Access Client Solutions deployment to the Mac Applications folder.



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- Provided install_acs Javascript on Linux will copy the IBM i Access Client Solutions deployment to the locations of
 - /usr/share/applications/
 - /opt/ibm/iAccessClientSolutions/



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- IBM i Access Client Solutions v1r1m4 Update 3 (October 2015) provided an update to these deployment scripts for Windows to allow an Administrator to control some of the deployment behavior and how the client behaves for the user.
 - An Administrator runs the script passing a parameter of /AdminConfig
 - The Administrator is then presented with a series of questions about the deployment, like if ACS should be ran locally or remotely, what functions will the user have, and if desktop icons should be created.
 - The IBM i Access Client Solutions product files are placed in a central location
 - Users run the deployment script and IBM i Access Client Solutions is deployed to their Windows workstation.
- More Details
 - <https://www.ibm.com/developerworks/ibmi/library/i-ibmi-access-client-solutions-customization-trs/>
 - <http://www-01.ibm.com/support/docview.wss?uid=nas8N1020967>

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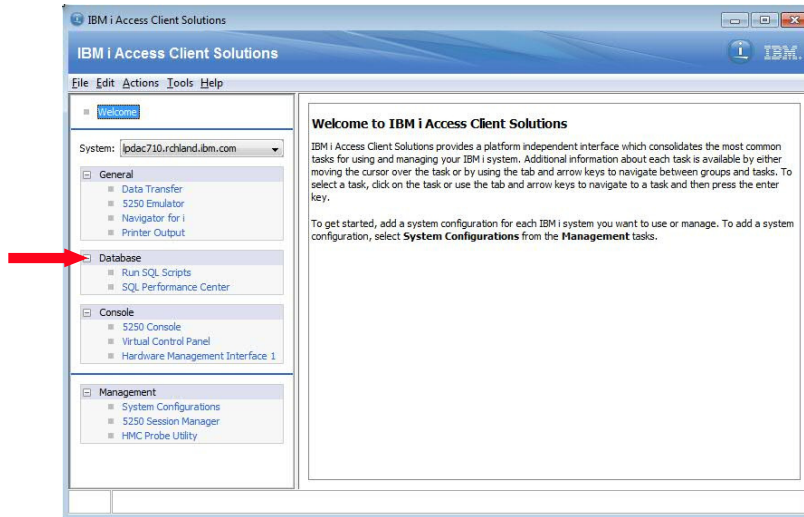
Database Enhancements



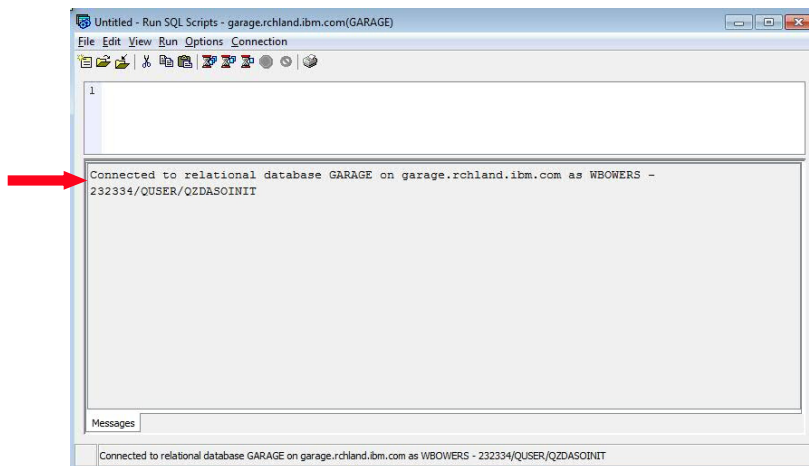
Database Enhancements

- IBM i Access Client Solutions v1r1m5 released December 2015 added a section of Database functions
 - Run SQL Scripts
 - SQL Performance Center
 - Closing the gap to Access for Windows System i Navigator
 - Visual Explain expected around July 2016

• New Database Section



• Run SQL Scripts



- Run SQL Scripts

The screenshot shows a window titled "Untitled - Run SQL Scripts - garage.rchland.ibm.com(GARAGE)". A red arrow points to the SQL editor containing the query: `1 select * from qiws.qcustcdt`. Below the editor is a table with 12 columns: CUSNUM, LSTNAM, INIT, STREET, CITY, STATE, ZIPCOD, CDTLMT, CHGCOD, BALDUE, and CDTDUE. The table contains 12 rows of customer data. At the bottom, a status bar indicates "Done. 12 rows retrieved." and "Messages select * from qiws.qcustcdt".

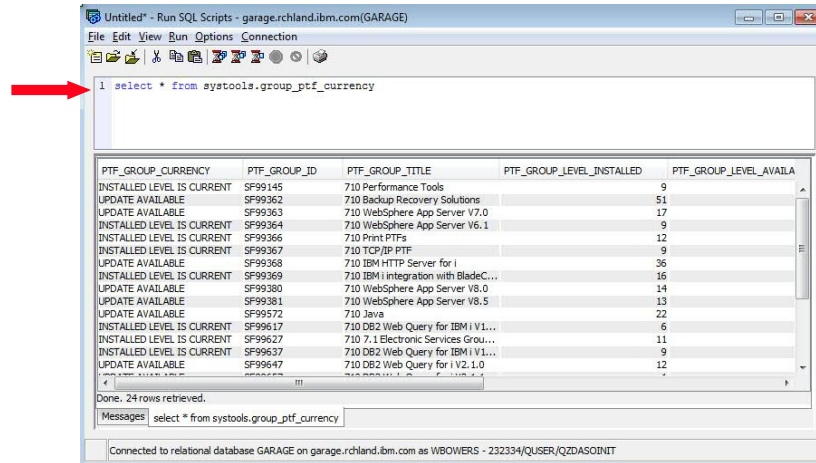
CUSNUM	LSTNAM	INIT	STREET	CITY	STATE	ZIPCOD	CDTLMT	CHGCOD	BALDUE	CTDDUE
938472	Henning	G K	4859 Elm Ave	Dallas	TX	75217	5000	3	37.00	0.00
839283	Jones	B D	218 NW 135 St	Clay	NY	13041	400	1	100.00	0.00
392859	Vine	S S	PO Box 79	Broton	VT	5046	700	1	439.00	0.00
938485	Johnson	J A	3 Alpine Way	Helen	GA	30545	9999	2	3987.50	33.50
397267	Tyron	W E	13 Myrtle Dr	Hector	NY	14841	1000	1	0.00	0.00
389572	Stevens	K L	208 Snow Pass	Denver	CO	80226	400	1	58.75	1.50
846283	Alison	J S	787 Lake Dr	Isle	MN	56342	5000	3	10.00	0.00
475938	Doe	J W	59 Archer Rd	Sutter	CA	95685	700	2	250.00	100.00
693829	Thomas	A N	3 Dove Circle	Casper	WY	82609	9999	2	0.00	0.00
593029	Williams	E D	485 SE 2 Ave	Dallas	TX	75218	200	1	25.00	0.00
192837	Lee	F L	5963 Oak St	Hector	NY	14841	700	2	489.50	0.50
583990	Abraham	M T	392 Mill St	Isle	MN	56342	9999	3	500.00	0.00

- Run SQL Scripts

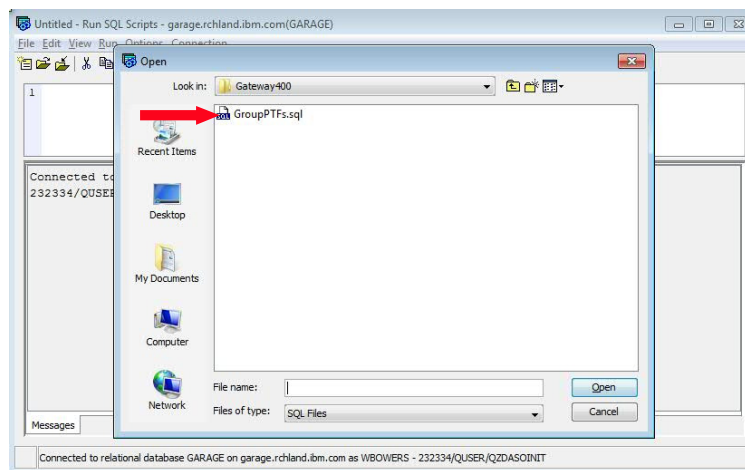
The screenshot shows a window titled "Untitled - Run SQL Scripts - garage.rchland.ibm.com(GARAGE)". A red arrow points to the SQL editor containing the query: `1 select CUSNUM, LSTNAM, CITY, ZIPCOD, BALDUE from qiws.qcustcdt where BALDUE > 0`. Below the editor is a table with 5 columns: CUSNUM, LSTNAM, CITY, ZIPCOD, and BALDUE. The table contains 10 rows of customer data filtered by BALDUE > 0. At the bottom, a status bar indicates "Done. 10 rows retrieved." and "Messages select CUSNUM,LSTNAM,CITY,ZIPCOD,BALDUE from qiws.qcustcdt where BALDUE > 0".

CUSNUM	LSTNAM	CITY	ZIPCOD	BALDUE
938472	Henning	Dallas	75217	37.00
839283	Jones	Clay	13041	100.00
392859	Vine	Broton	5046	439.00
938485	Johnson	Helen	30545	3987.50
389572	Stevens	Denver	80226	58.75
846283	Alison	Isle	56342	10.00
475938	Doe	Sutter	95685	250.00
593029	Williams	Dallas	75218	25.00
192837	Lee	Hector	14841	489.50
583990	Abraham	Isle	56342	500.00

- Run SQL Scripts

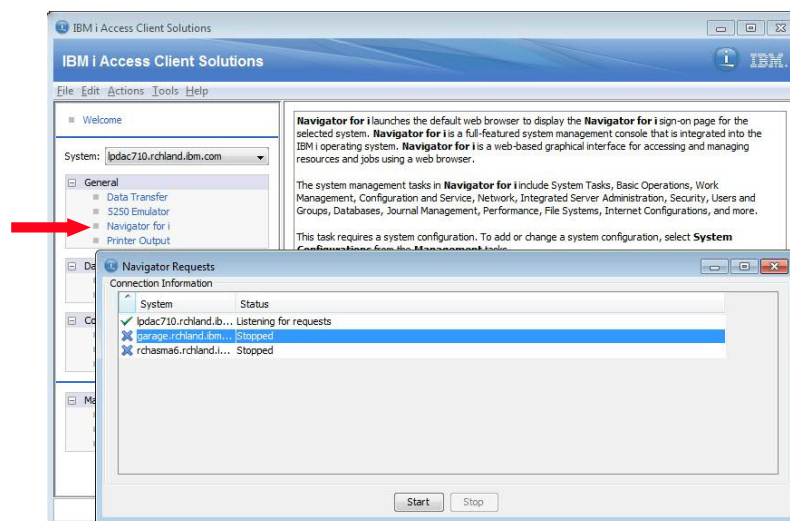


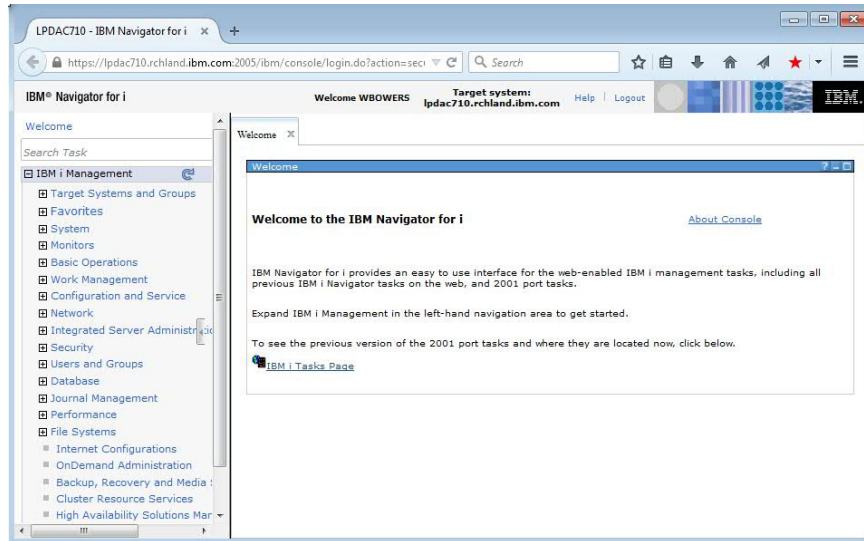
- Run SQL Scripts



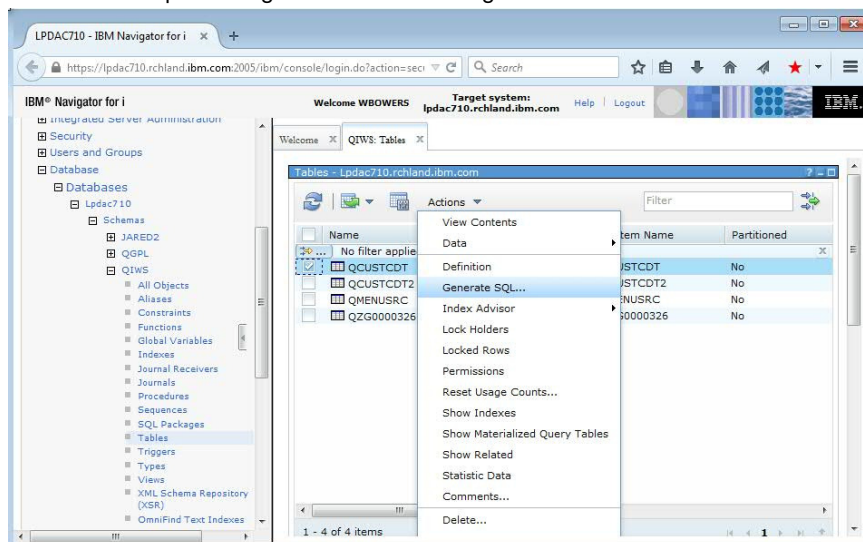
- Run SQL Scripts – Integration with IBM Navigator for I
 - IBM i Access Client Solutions v1r1m5 in conjunction with 2016 HTTP Group PTF Levels
 - A connection link is created between IBM Navigator for I
 - IBM i ACS authenticated/cached credentials are used to authenticate with IBM Navigator for i
 - No Kerberos integration
 - Allows IBM Navigator for i to send requests to IBM i Access Client Solutions

- Run SQL Scripts – Integration with IBM Navigator for i





- Run SQL Scripts – Integration with IBM Navigator for i



- Run SQL Scripts – Integration with IBM Navigator for i

```

1 -- Generate SQL
2 -- Versions:          V7R1M0 100423
3 -- Generated on:      04/12/16 21:06:56
4 -- Relational Database: LPDAC710
5 -- Standards Option:  DB2 for i
6 CREATE TABLE QIWS.QCUSTCDT (
7 -- SQL1508 10 REUSEDLT(*NO) in table QCUSTCDT in QIWS ignored.
8 -- SQL1508 20 Number of members for QCUSTCDT in QIWS not valid.
9 CUSNUM NUMERIC(6, 0) NOT NULL DEFAULT 0 ,
10 LSTNAM CHAR(8) CCSID 37 NOT NULL DEFAULT '' ,
11 INIT CHAR(3) CCSID 37 NOT NULL DEFAULT '' ,
12 STREET CHAR(13) CCSID 37 NOT NULL DEFAULT '' ,
13 CITY CHAR(6) CCSID 37 NOT NULL DEFAULT '' ,
14 STATE CHAR(2) CCSID 37 NOT NULL DEFAULT '' ,
15 ZIPCOD NUMERIC(6, 0) NOT NULL DEFAULT 0 ,
16 CDTLMT NUMERIC(4, 0) NOT NULL DEFAULT 0 ,
17 CHGCOD NUMERIC(1, 0) NOT NULL DEFAULT 0 ,
18 BALDUE NUMERIC(6, 2) NOT NULL DEFAULT 0 ,
19 CDTDUE NUMERIC(6, 2) NOT NULL DEFAULT 0 )
20
21 RCDPMT CUSREC ;
22

```

Connected to relational database LPDAC710 on lpdac710.rchland.ibm.com as WBOWERS - 824079/QUSER/QZDASOINIT

Messages

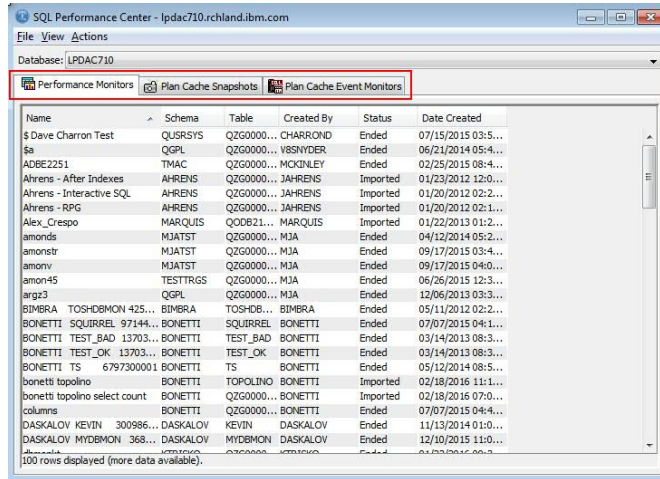
Connected to relational database LPDAC710 on lpdac710.rchland.ibm.com as WBOWERS - 824079/QUSER/QZDASOINIT

- SQL Performance Center

Name	Type	Status	Schema
No filter applied			
\$a	Detailed	Ended	QGPL
\$ Dave Charron IASP Test	Detailed	Ended	MYIASPT
\$ Dave Charron IASP Test 2	Detailed	Ended	MYIASPT
\$ Dave Charron Test	Detailed	Ended	QURSRY:
00419,042,649	Detailed	Imported	PMR0041
04715,498,000	Detailed	Imported	ROMANL:
19139,122,000 DBMON1	Detailed	Imported	PMR1913
19139,122,000 DBMON2	Detailed	Imported	PMR1913
ADBE2251	Detailed	Ended	TMAC
Ahrens - After Indexes	Detailed	Imported	AHRENS
Ahrens - Interactive SQL	Detailed	Imported	AHRENS
Ahrens - RPG	Detailed	Imported	AHRENS
Alex_Crespo	Detailed	Imported	MARQU!
amon45	Detailed	Ended	TESTTRC
amonds	Detailed	Ended	MJATST

1 - 100 of 353 items

- SQL Performance Center



Name	Schema	Table	Created By	Status	Date Created
\$ Dave Charron Test	QURSRSYS	QZG0000...	CHARROND	Ended	07/15/2015 03:5...
\$a	QGPL	QZG0000...	VBSNYDER	Ended	06/21/2014 05:4...
ADBE2251	TMAC	QZG0000...	MCKINLEY	Ended	02/25/2015 08:4...
Ahrens - After indexes	AHRENS	QZG0000...	JAHRENS	Imported	01/23/2012 12:0...
Ahrens - Interactive SQL	AHRENS	QZG0000...	JAHRENS	Imported	01/20/2012 02:2...
Ahrens - RPG	AHRENS	QZG0000...	JAHRENS	Imported	01/20/2012 02:1...
Alex_Crespo	MARQUIS	Q00821...	MARQUIS	Imported	01/22/2013 01:2...
amonds	MJATST	QZG0000...	MJA	Ended	04/12/2014 05:2...
amonstr	MJATST	QZG0000...	MJA	Ended	09/17/2015 03:4...
amonrv	MJATST	QZG0000...	MJA	Ended	09/17/2015 04:0...
amon45	TESTTRGS	QZG0000...	MJA	Ended	06/26/2015 12:3...
argz3	QGPL	QZG0000...	MJA	Ended	12/06/2013 03:3...
BIMBRA TOSHDBMON 425...	BIMBRA	TOSHDB...	BIMBRA	Ended	05/11/2012 02:2...
BONETTI SQUIRREL 97144...	BONETTI	SQUIRREL	BONETTI	Ended	07/07/2015 04:1...
BONETTI TEST_BAD 13703...	BONETTI	TEST_BAD	BONETTI	Ended	03/14/2013 08:3...
BONETTI TEST_OK 13703...	BONETTI	TEST_OK	BONETTI	Ended	03/14/2013 08:3...
BONETTI TS 6797300001	BONETTI	TS	BONETTI	Ended	05/12/2014 08:5...
bonetti topolino	BONETTI	TOPOLINO	BONETTI	Imported	02/18/2016 11:1...
bonetti topolino select count	BONETTI	QZG0000...	BONETTI	Imported	02/18/2016 07:0...
columns	BONETTI	QZG0000...	BONETTI	Ended	07/07/2015 04:4...
DASKALOV KEVIN 300986...	DASKALOV	KEVIN	DASKALOV	Ended	11/13/2014 01:0...
DASKALOV MYDBMON 368...	DASKALOV	MYDBMON	DASKALOV	Ended	12/10/2015 11:0...

100 rows displayed (more data available)

Demo / Questions





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The IBM benchmarks results shown herein were derived using particular, well configured, development-level and generally-available computer systems. Buyers should consult other sources of information to evaluate the performance of systems they are considering buying and should consider conducting application oriented testing. For additional information about the benchmarks, values and systems tested, contact your local IBM office or IBM authorized reseller or access the Web site of the benchmark consortium or benchmark vendor.

IBM benchmark results can be found in the IBM Power Systems Performance Report at http://www.ibm.com/systems/p/hardware/system_perf.html.

All performance measurements were made with AIX or AIX 5L operating systems unless otherwise indicated to have used Linux. For new and upgraded systems, AIX Version 4.3, AIX 5L or AIX 6 were used. All other systems used previous versions of AIX. The SPEC CPU2006, SPEC2000, LINPACK, and Technical Computing benchmarks were compiled using IBM's high performance C, C++, and FORTRAN compilers for AIX 5L and Linux. For new and upgraded systems, the latest versions of these compilers were used: XL C Enterprise Edition V7.0 for AIX, XL C/C++ Enterprise Edition V7.0 for AIX, XL FORTRAN Enterprise Edition V9.1 for AIX, XL C/C++ Advanced Edition V7.0 for Linux, and XL FORTRAN Advanced Edition V9.1 for Linux. The SPEC CPU95 (retired in 2000) tests used preprocessors, KAP 3.2 for FORTRAN and KAP/C 1.4.2 from Kuck & Associates and VAST-2 v4.01X8 from Pacific-Sierra Research. The preprocessors were purchased separately from these vendors. Other software packages like IBM ESSL for AIX, MASS for AIX and Kazushige Goto's BLAS Library for Linux were also used in some benchmarks.

For a definition/explanation of each benchmark and the full list of detailed results, visit the Web site of the benchmark consortium or benchmark vendor.

TPC	http://www.tpc.org
SPEC	http://www.spec.org
LINPACK	http://www.netlib.org/benchmark/performance.pdf
Pro/E	http://www.proe.com
GPC	http://www.spec.org/gpc
NotesBench	http://www.notesbench.org
VolanoMark	http://www.volano.com
STREAM	http://www.cs.virginia.edu/stream/
SAP	http://www.sap.com/benchmark/
Oracle Applications	http://www.oracle.com/apps_benchmark/
PeopleSoft - To get information on PeopleSoft benchmarks, contact PeopleSoft directly	
Siebel	http://www.siebel.com/crm/performance_benchmark/index.shtml
Baan	http://www.ssglobal.com
Microsoft Exchange	http://www.microsoft.com/exchange/evaluation/performance/default.asp
Veritest	http://www.veritest.com/clients/reports
Fluent	http://www.fluent.com/software/fluent/index.htm
TOP500 Supercomputers	http://www.top500.org/
Ideas International	http://www.ideasinternational.com/benchmark/bench.html
Storage Performance Council	http://www.storageperformance.org/results

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SPEC	http://www.spec.org
LINPACK	http://www.netlib.org/benchmark/performance.pdf
Pro/E	http://www.proe.com
GPC	http://www.spec.org/gpc
STREAM	http://www.cs.virginia.edu/stream/
Veritest	http://www.veritest.com/clients/reports
Fluent	http://www.fluent.com/software/fluent/index.htm
TOP500 Supercomputers	http://www.top500.org/
AMBER	http://amber.scripps.edu/
FLUENT	http://www.fluent.com/software/fluent/fl5bench/index.htm
GAMESS	http://www.msg.chem.iastate.edu/games
GAUSSIAN	http://www.gaussian.com
ABAQUS	http://www.abaqus.com/support/sup_tech_notes64.html#select_Abaqus_v6.4_Performance_Data
ANSYS	http://www.ansys.com/services/hardware_support/index.htm#select_Hardware_Support_Database , then benchmarks.
ECLIPSE	http://www.sis.slb.com/content/software/simulation/index.asp?seq=geoquest&
MMS	http://www.mmm.ucar.edu/mms/
MSC.NASTRAN	http://www.mssoftware.com/support/prod%5Fsupport/nastran/performance/v04_sngl.cfm
STAR-CD	www.cd-adapco.com/products/STAR-CD/performance/320/index.html
NAMD	http://www.ks.uiuc.edu/Research/namd
HMMER	http://hmmerr.janelia.org/ http://powerdev.osuosl.org/project/hmmerrAltivecGen2mod

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- rPerf for AIX
- rPerf (Relative Performance) is an estimate of commercial processing performance relative to other IBM UNIX systems. It is derived from an IBM analytical model which uses characteristics from IBM internal workloads, TPC and SPEC benchmarks. The rPerf model is not intended to represent any specific public benchmark results and should not be reasonably used in that way. The model simulates some of the system operations such as CPU, cache and memory. However, the model does not simulate disk or network I/O operations.
- rPerf estimates are calculated based on systems with the latest levels of AIX and other pertinent software at the time of system announcement. Actual performance will vary based on application and configuration specifics. The IBM eServer pSeries 640 is the baseline reference system and has a value of 1.0. Although rPerf may be used to approximate relative IBM UNIX commercial processing performance, actual system performance may vary and is dependent upon many factors including system hardware configuration and software design and configuration. Variations in incremental system performance may be observed in commercial workloads due to changes in the underlying system architecture.
- All performance estimates are provided "AS IS" and no warranties or guarantees are expressed or implied by IBM. Buyers should consult other sources of information, including system benchmarks, and application sizing guides to evaluate the performance of a system they are considering buying. For additional information about rPerf, contact your local IBM office or IBM authorized reseller.
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- CPW for IBM i
- Commercial Processing Workload (CPW) is a relative measure of performance of processors running the IBM i operating system. Performance in customer environments may vary. The value is based on maximum configurations. More performance information is available in the Performance Capabilities Reference at: www.ibm.com/systems/i/solutions/perfmgmt/resource.html

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