

The technical bulletin from Quattro Consulting, the UK's leading independent technical consultancy for System i

Competitive pricing for new System i

On April 10th IBM made some important new announcements on System i hardware and software.

System i 515 and 525

Most importantly two new models, the 515 Express and 525 Express, are introduced. These are important because they bring the price point of System i down to a very competitive level.

To date most of the uni-processor 520 models have had the processor 'slugged' to slow it down to 600, 1200 and 2800 CPWs when the processor itself was capable of around 3,800 CPWs.

The new 515 removes this restriction by allowing all of the processor capability to be available for ALL workloads. The 515 Express is limited in its upgrade options but the most popular features are available.

The 525 can be ordered as an upgrade from i810 and 520 models. The 515 cannot be purchased as an upgrade.

User based pricing for i5/OS

The 515 and 525 models also differ in that they provide i5/OS pricing based upon the number of users rather than by processor, which is the way the remaining 5xx models are priced.

As an example a model 515 with 5 users of i5/OS would cost around £5,000.

How is user based pricing calculated? IBM specifies that "an i5/OS user is a person who accesses i5/OS". This could be someone who logs in using a user profile, LDAP, Kerberos(EIM) or fingerprint ID.

If I log on to i5/OS with my user ID five times so that I have five concurrent sessions, this only counts as 1 x i5/OS user entitlement. The same rule applies if I sign in to three partitions on the same System i, only one i5/OS entitlement is required for me as a person.

There will be some confusion over this during the initial stages but IBM have provided us with a full FAQ which answers many of the questions customers will have in this area.

If you are interested in speaking to us about the new models or user-based pricing, please contact us at sales@QuattroConsulting.co.uk

Banking on Quattro

In December 2006 Quattro won a significant hardware deal for IBM System i, BladeCenter and Storage worth £1.5M. The customer, who cannot be named at present, is a new startup company based in the UK.

Quattro were involved with the customer from the outset of the project helping the customer with the IT infrastructure design and implementation across all the IBM platforms.

The final configuration consisted of:

2 x System i 550

Over 100 IBM Blades using Intel and POWER 5 technologies

2 x DS4700 SAN

Quattro has always prided itself on the high level of systems integrations skills within the organisation and this project demonstrated these skills in every way.

Keep software maintenance up-to-date

When you buy a new System i you get the operating system, i5/OS, as part of the order. Along with this you also purchase IBM Software Maintenance (SWMA) which allows you to receive new releases and get support from IBM for software related problems.

Most customers' SWMA contracts run for either 1 or 3 years. It is important that you renew your SWMA when it is due, failure to do so may mean you have to pay an additional 'after licence' charge if you are late.

As an IBM Business Partner we can help you with this. Simply let us know your i5, iSeries or AS/400 serial number and the current operating system release you are running, then we can remind you when your SWMA is due and process your renewal for you too.



Getting the most from your Sy

Although we need fewer staff to run System i Family computers compared with other systems and it appears to be a simple box, it is an extremely complex computer system and can be as sophisticated to operate as any other business computer system currently available.

I would say that the majority of customers these days are using i5/OS for green screen access and ODBC/JDBC but not much more. Certainly some of our customers are using WebSphere AS, Domino and Integrated Windows Server functionality too.

This article is split into three sections:

Beginners The very least you should be doing in i5/OS (OS/400)
Slightly Adventurous What most users should be doing with their systems
My Favourite Users Using the system to its full potential

Beginners

In this section we need to look at the areas where EVERY single i5/OS system or partition should be paid attention, this really is basic Work Management.

PTF's

It goes without saying you should have, where possible, the latest OS release and PTFs installed. Why? Because each new release of the OS has new features and functionality which can help you get the most out of your investment in System i. Not only that, but IBM has continued to improve the performance and intelligence built in to the database on the system and, after all, the database is the heart of the vast majority of i5/OS applications.

Memory

Whether you're installing a new application now or have been running applications for a number of years, it is important that you allocate the memory on the system appropriately. I remember a couple of years ago visiting a customer site where their iSeries had 10GB of memory, 8GB of this memory was allocated to 100 x 5250 sessions. I reconfigured the memory and reduced the *INTERACT memory pool from 8GB to about 90MB without impacting the interactive user's response time. Then, by allocating some of our newly available memory, we allocated 2 GB to the batch pool. Their long-standing problem with slow running batch jobs disappeared within minutes.

The point here is that it is important to get the memory pool allocation right. You don't get the best performance out of an F1 car unless it's tuned properly.

Disk

It's also important to get your disk configuration right. We all know that i5/OS likes disk arms so the more the merrier, but what about journalling, Network Storage Spaces, Virtual Tape, ASPs? It depends. Sometimes lots of disks in one ASP is the right option but other times a separate ASP with compressed disks may be the answer. Again, it's important to understand what you're using the system for and what the applications will be doing in terms of disk utilisation.

Slightly Adventurous

Let's say you're all doing at least the above and have got the basics right, what next? You need to start making all that core business data available to the necessary users in your business and to your customers and/or suppliers. I'll ignore security in this article, you know you have to do it anyway.

Sharing data with Windows

Most of us have Windows clients and servers so it's extremely common to make DB2 for i5/OS data accessible to Windows applications. It's also very common for customers to take data from Windows machines and make it available to i5/OS. If you're thinking data transfer or FTP then go straight to jail and don't pass go!

Windows applications and developers have been able to access DB2 for i5/OS via ODBC for over a decade now. This gives direct access to the data stored in i5/OS, not a copy of the data. Other Microsoft data access technologies are also available to gain access to DB2 data, .Net for example. All the MS office products have ODBC support built in so it's easy to access DB2 data directly from Excel and Word. OpenOffice 2 has ODBC support too.

JDBC is similar to ODBC but is used by Java programs. As you know Java can run on pretty well any platform, so this extends the reach of DB2 data even further. If you're running WebSphere AS under i5/OS and it accesses DB2 for i5/OS data then this will use a JDBC driver to read, write and update DB2 data.

Windows Shares

NetServer, built in to i5/OS, allows you to create shares to Libraries and IFS folders under i5/OS, just like you would do on a Windows server. NetServer makes i5/OS look and feel like a Windows server in 'My Network Places', no iSeries Access software is required on the Windows machine.



NetClient (QNTC) is an i5/OS feature, since V4R2, which allows i5/OS based applications to access data which is located on Windows shares. You might copy data from your desktop to and from a share on a Windows server, QNTC allows the same from 5250, Qshell and PASE environments. Many of my customers drop data from DB2 files straight in to Windows servers from CL programs, and vice versa.

Web Serving

Don't forget that i5/OS comes with a built in web server too, the Apache Web Server. This is useful if you want to start making some static web pages available to your users. I have found this to be quick and efficient, but you must ensure the configuration is done right and there are some additional Work Management considerations too. It's not uncommon to see the QHTTSPVR subsystem running with an activity level of 5, and because there are 5 active jobs, this seems to make sense. But if you press F11 a couple of times on the WRKACTJOB screen and count the number of threads for the web server jobs there will probably be 40 or more. In this environment we need to consider the threads, not just the number of jobs.

My Favourite Users

The best customers are those using System i to its full capabilities. These customers have made an investment in the system and are getting real value for money. After nearly twenty years of OS/400 and i5/OS, shouldn't everyone be at this stage?

Expert Cache

Expert Cache is a feature we've had since V2R3. When enabled it allows the system to pre-fetch data from a database file straight in to memory. This is really useful for programs which read sequentially through database files as it reduces the amount of time the program has to wait for data to be read from disk. To switch it on you simply enter *CALC in the PAGING OPTION field of the WRKSYSSTS screen, but hold on – unless you've got those basics right and your shared pools set up correctly, you might find that changing this has an adverse effect on your system. By the way, if you've been told that *CALC means that OS/400 can increase and decrease the memory in the pool it's set for and that *FIXED means that the memory can't be adjusted, you've been misinformed. I've heard this many times and it's wrong. *FIXED means don't use Expert Cache for this memory pool, e.g. it would never make sense to have Expert Cache active on *INTERACT.

PDM for the 21st Century

For the developers out there you really should be looking at moving away from PDM and using WebSphere Development Studio Client for iSeries (WDSCi). I've mentioned in the past that PDM hasn't been enhanced by IBM since V4R4 and there are no plans to do so in the future. WDSCi takes some getting used to, but it does give you a single Windows-based application to access the system in a similar way to PDM as well as work on CL, RPG and COBOL applications in a very nice and easy-to-use SEU type editor.

Web Enablement the easy way

On from there you should also be looking at using WebFacing and HATS to convert your existing applications from green screen to web based. Using the new V5R4 WebFacing Deployment with HATS

Technology (WDHT) you can 'webify' any 5250 based applications, and anyone accessing these applications via a web browser does not incur an interactive penalty. This could save some serious money as Enterprise Edition systems are way more expensive than Standard Edition systems.

Anything else?

Actually, yes. The problem is that I could fill a book with ways you can get the most out of the system. My tip to anyone reading this is 'do not underestimate what System i can do'. Next time there's a business requirement, don't assume it's not possible or too difficult with i5/OS and that a Windows server will be the answer. If you do have to use Windows then at least consider using an Integrated Windows Server with your System i – yet another way to get the most from your system.

As I always tell my customers, if you're not sure, then ask us.

Glen Robinson



COMMON Europe

Quattro will be represented at this year's COMMON Europe event in London on May 19th to 22nd where will be exhibiting on stand 14.

Glenn Robinson will also be presenting on the morning of May 19th. In his sessions Glenn will cover i5/OS resiliency utilising Independent ASP's, Cross Site Mirroring and external storage.

New team players

Amjad Rahim has joined Quattro from another business partner. Amjad has been working with i5 and iSeries since 1989. He started his career at IBM where he spent 11 years providing third level support for 6 years and then moving into pre and post sales. Since leaving IBM he has worked for a number of IBM business partners providing pre and post sales technical support mostly involving system design and implementation. Amjad is a Certified IBM Systems Expert having successfully completed the i5OS V5R4 technical implementation and design exams

Kurt Johnson. Educated at Sheffield University, the 29 year old, who has experience of both the Manufacturing and Retail sectors, has joined the team as a Finance and Administration Officer. An avid sportsman, Kurt also plays rugby semi-professionally for Coventry RFC.

Kevin Wainwright joins the Quattro team as a Technical Support Analyst to support the Technical Consultants in the field. Kevin brings technical and project management expertise to the Quattro team having spent 18 years in IT industry. Kevin has a broad range of Information Technology knowledge and is no stranger to the System i platform working in manufacturing and automotive sectors. Kevin is a keen tennis and snooker player, and plays for local clubs in the Coventry & District Leagues.

Formed in 1997, Quattro Consulting is one of the leading independent System i technical consultancies in the UK. The directors of Quattro realised that other System i related service providers were not specialists on the technical aspects of System i, with their own expertise in software development, marketing and support.

Products and Services include

- High Availability Planning and Testing
- Operating System upgrades
- System Health Checks
- IBM Director integration
- Database Performance Analysis
- Linux and AIX implementation
- Linux and AIX administration
- Training
- Backup and Recovery
- Lotus Domino Integration
- i5/OS Security Audit
- Capacity Planning.

For a complete list of all the skills and services Quattro can provide contact 0870 861 0070.

Web Enablement skills include:

- IBM HTTP Server (powered by Apache) configuration
- ASF Tomcat and OS/400 integration
- Java Server Pages/Servlets
- Net.Data
- Web to legacy application integration
- WebFacing
- RPG CGI programming
- PHP development
- .Net integration
- ASP development with RPG and COBOL.

Who we're working with

At Quattro we make it a priority to provide the most appropriate business and technical solutions to our customers. This means that we are very choosy about who we work with to introduce new and additional offerings to our customers alongside Quattro.

In the last year we have partnered with a select number of organisations who we believe can provide our customers with new or best of breed products.



DIS UK Limited are the makers of the **Paranoia2** tape encryption module. This hardware-only solution sits between your server and your SCSI or Fibre attached tape drive. As data flows from the system to the tape drive the Paranoia2 encrypts the data before it is written to the tape device. As there is no software

on the server, any operating system can use this device, be it i5/OS, Windows, Solaris, Unix or Linux.

Raz-Lee provide i5/OS based security products called iSecurity. There are a number of these on the market but three particular modules caught our eye:

The **Firewall** model protects ALL the Exit Points available in i5/OS, this is not true of all security products.

Capture is a great compliance and anti-fraud tool. This module silently captures and documents user screens as they navigate the system or applications. These can be recorded and played back.

The **Anti-Virus** module provides real time anti-virus scanning for your IFS objects. Although i5/OS doesn't really suffer with virus issues it can still carry files in the IFS which are virus infected. These may then be moved or ftp'd to other systems where they may have disastrous consequences.

SpaceTec provide a number of software products, with application modernisation and intelligent output management being of particular interest to Quattro.

InterForm provides you with the ability to use a Graphical design tool to manage and manipulate your spool files so that the data on these can be transformed and enhanced and printed on just about any printer in your organisation using PCL for HP and HP compatible printers with ZPL for Zebra barcode printers.

IceBreak is a rapid application development environment helping you create web based applications using HTML and RPG. Your existing skills and investment in RPG are protected but you can provide your users, customers and suppliers with a modern, web based front end. Unlike many other modernisation products there's no need to install a heavyweight Java-based application server.

All System i users need iSist

iSist support contracts from Quattro

The Quattro iSist support contract has been developed for all iSeries, AS/400 and i5 users who need a more flexible, helpful and knowledge-based approach to technical services.

All Quattro iSist packages offer the user the facility to gain immediate technical support, from the inevitable daily 'How do I do this ...?' question, to the more detailed planning and implementation of an upgrade, application interface or the resolution of a serious problem.

All iSistance packages include:

Annual Contract: Each iSist contract will provide 12 months continued access to all of the Quattro technical resource services.

Project Days: iSist packages include a number of 'on site' project days by a member of the Quattro Support Team.

Email Assistance: Clients may prefer Quattro to receive and respond to their queries by email.

Telephone Assistance: Once your call has been received at our Helpdesk, a fully skilled technical adviser will call back and resolve the problem there and then, without the need for numerous layers of support staff.

Hours of coverage: 9am-5pm Monday to Friday, with extra coverage available within Tier-2 and Tier-3.

Accountability: All clients can monitor the current status of their iSist contract at any point and the details of each service call via the Quattro 'online' tracking facility.

iSist packages

Tier 1 0 Project days – 15 support hours **Tier 1+** 3 Project days – 15 support hours

Tier 2 4 Project days – 20 support hours **Tier 2+** 6 Project days – 25 support hours

Tier 3 8 Project days – 30 support hours **Tier 3+** 12 Project days – 35 support hours

iSist packages start at just £2500 per year and can include 24x7 support.

For more information about Quattro iSist support contracts, contact: Helen Thomas.
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For more details on the services Quattro Consulting can provide visit:

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