



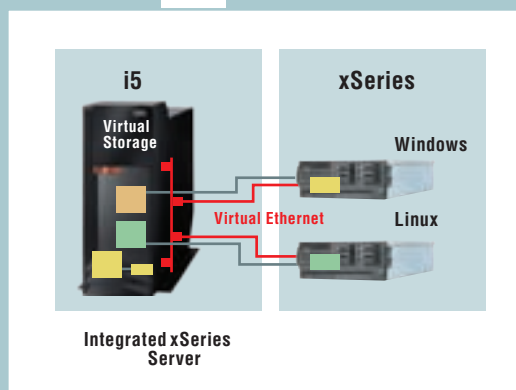
**Why “i” for Windows?**

As well as running i5/OS (the latest release of OS/400), UNIX®, and Linux®, the IBM @server iSeries is able to run Intel® based applications – either Microsoft® Windows® or Linux.

This is possible to achieve in two slightly different ways:

- Using an Integrated xSeries Server (IXS) which is plugged in to the iSeries server or expansion rack
- Using an Integrated xSeries Attached (IXA) which allows larger Intel servers to be linked to the iSeries via the High Speed Loop (HSL)
- Throughout this document we will refer to them collectively as Integrated xSeries Solutions (IXS/IXA).

**But, the biggest question is not how you do this, but why you would want to do this?**



### Virtual LAN for faster application integration

Many applications use components that span multiple servers and operating systems. An example might be an ERP system running on an iSeries but which needs to link to a CRM system running on Windows.

Using the IBM @server i5 Virtual LAN, Windows, OS/400, UNIX and Linux partitions can communicate without needing to 'leave the box'.

- Simplify the network – remove or free up routers and switches
- Secure your LAN – it is impossible to 'sniff' communications via the VLAN
- The VLAN operates at 1Gbit and can support over 4,000 virtual ethernet connections
- Up to five VLAN connections are possible per Integrated IBM @server xSeries Solution.

One study by JD Edwards demonstrated that their Windows based HR application performed 12 percent faster in an IXS/IXA environment than in a stand alone Intel configuration.

### Fast server recovery in the event of a failure

Integrated xSeries solutions use virtual storage spaces on the iSeries, this means that if there was a failure on the xSeries hardware, the server software environment can be manually or even automatically 're-attached' to a stand-by server and brought back online within a matter of minutes.

There is no need to rebuild the server, no need to restore from tape, no need to be physically onsite – by using an iSeries command either over a browser, a console, or even a hand-held device, this server could be brought back online in five minutes. Furthermore, this 'hot spare' could act as the hot spare to multiple Intel servers.

In the event of a total system failure or a DR situation where you needed to recreate your entire environment, the whole system can be restored much faster due to the Integrated storage and single tape back up.

### Simplified storage management

Integrated xSeries solutions share the iSeries storage. This has a number of immediate benefits:

- Because iSeries storage is automatically spread across multiple disks, access to the Windows data can be much faster.
- The disk that is allocated to the Windows server is 'virtual disk'. This means that if the server begins to 'run out of disk' it is simple to allocate additional disk. In fact it takes less than five minutes and can be done without needing to reboot the server.
- Each Intel storage space on the iSeries can be from 1MB up to 1TB in size and up to 32 storage spaces can be allocated per Intel server – great for file storage and management.

### Simple integrated tape backup

It is difficult to get excited about back up and recovery, but it is a big overhead in managing an IT operation. Imagine a world where you can back up all your systems in a single go... its possible with iSeries and Windows Integration.

- Back up Windows data at the file level onto iSeries tape devices at the same time as OS/400 data
- Reduce the amount of tapes you manage and manual tasks that need to be carried out
- Perform a point in time back up and restore – don't do them separately at different times and worry about reconciling systems later
- Ideal in a DR situation where you can restore your entire environment at the same time.

### Simplified test and development

Also as a result of the way Integrated xSeries storage is managed, it is possible to switch the storage space that is associated with a physical server. OK, so what does that mean?

- *Develop an application on one server and then test it on the actual production hardware when not in use (eg overnight or at weekends)*
- *Develop an application on a different Operating System (eg Linux) and then attach that 'image' to the Integrated xSeries Solution and test it*
- *You could even develop this application in a virtual partition (using VMWare GSX) and then rapidly test or deploy it on the target platform in a matter of minutes*
- *Roll back to the original 'image' in minutes if the new deployment does not perform as expected.*

### Remote management and reporting

Integrated Management with iSeries Navigator and IBM Director multi-platform to provide remote management and alerting.

- *Advanced notification from the IBM Director multi-platform about predictive and current failures on Integrated xSeries Solutions*
- *iSeries Navigator provides centralised administration and management of multiple environments from a single interface*
- *Enabled for Wireless, PDA and Web Browser for alerting and problem resolution*
- *Enables customers to reduce cost and complexity by leveraging iSeries operations and resources to monitor and manage Integrated xSeries Solutions.*

### Better total cost of ownership

Independent studies from IDC show that running Windows on an Integrated xSeries Solution delivers significant operational savings – not least due to the reduced amount of unplanned downtime experienced by users (reduced by 90 percent). The study demonstrated an overall ROI of over 200 percent in three years.

To download this study to see for yourself, visit: [ibm.com/servers/eserver/iseries/constl/idc\\_roi](http://ibm.com/servers/eserver/iseries/constl/idc_roi)

### Linux and Windows

Since 2005 it has been possible to run both Linux (SUSE and RedHat) and various releases of Windows on the Integrated xSeries servers.

But why run Linux in on an Integrated xSeries Solution when it can be run natively on the iSeries? The reason is that the Linux that runs natively on the iSeries is 64 bit Linux. Most Linux applications today are 32 bit and would need to be recompiled in order to run in 64 bit.

Not everyone wants to do that, or is perhaps willing to support that and as such these applications can now be run in 32 bit in the IXA environment.

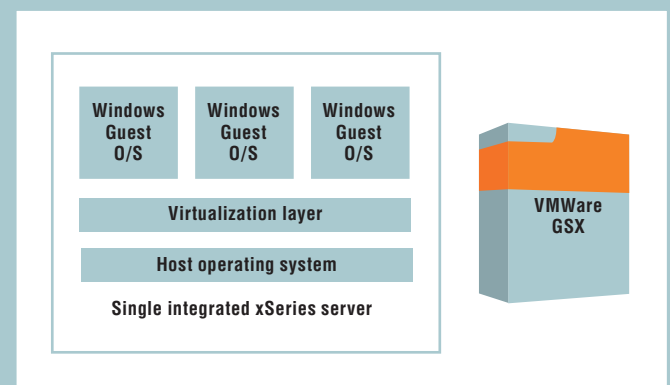


### Sub processor Intel partitions with VMWare GSX

When looking to consolidate the number of Intel servers used by an organisation there are a number of options that can be employed from application consolidation to moving systems to an iSeries LPAR running Linux. However, for some applications it makes sense, or is necessary, to run them on Windows – so what then?

With the Integrated xSeries Solution it is possible to run multiple virtual Windows servers on a single physical server using VMWare GSX.

This means that small Intel applications that use only fractions of a processor to run can now be consolidated onto a single Integrated xSeries server – vastly reducing the number of servers you have to manage.





### Monthly iSeries 'in touch' Events

Also, why not register for one of our free monthly iSeries briefings where we provide a product update and demonstrate many of the latest iSeries capabilities including:

- *IBM Workplace on iSeries*
- *Domino 7 on iSeries*
- *Web enabling iSeries applications with WebSphere*
- *Running AIX and Linux on iSeries*
- *Integrating Windows servers with iSeries.*

To see the agenda, forthcoming dates, and to register, please visit:  
**ibm.com/uk/news/events/intouch**

### Further information

To find out more details about windows on iSeries please visit: **ibm.com/servers/eserver/iseries/integratedxseries/**  
For general information about iSeries please visit the following site which also contains information on how to contact an IBM representative: **ibm.com/servers/uk/eserver/iseries/**

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