Are You Unsupported?

By Garth Tucker

In a perfect world, we would all be at the latest release of hardware and OS or maybe n-1, but as we all know, it's not a perfect world and we're not perfect people and through no real fault of our own we sometimes end up being on the wrong side of the supported line.

Back in September 1999, I co-authored an article for *TUG eServer magazine* with the late **Byron Goodes** and **Jay Burford** of the TUG Board of Directors on "Modernizing your AS400". We discussed the new hardware and software of the day along with an exciting new option, Logical Partitioning. It's hard to believe that today there are still people running their businesses on hardware and software that was not supported at that time. Even those of us with classic cars don't try and use them to get back and forth to work each day.

So perhaps it's time we retired that Model SXX or 6XX, pull it out on sunny days, give it a coat of wax and run a few queries for old times sake. Some things in life are not optional and running on unsupported systems should be one of them. I know personally of two shops in the GTA who still run CISC machines. No, I'm not kidding or making this up for your reading entertainment. In the case of one, a privately held family business, IT has not made a convincing enough argument to the ownership on why they need to move forward. The AS400's legendary stability has worked against them and allowed them to continue to keep this antiquated

hardware running their business. In the case of the other, IT doesn't see a business requirement to move forward and cannot see the point in fixing something that they see as not broken. That's their opinion and they're entitled to it. I'm not in the business of telling people how to run their business, unless they ask my opinion, and these guys only ask me to help them stay running with any operations issues. As AS400/iSeries/i5 users we are, in some cases, victims of the platform's strengths. We will not be touching on CISC to RISC upgrades in this article as that is a whole topic unto itself and the rarity of them these days doesn't make it a particularly hot topic.

Where does this leave us? Out in the cold? Not necessarily — where there's a will, there's a way.

I decided to write this article for two reasons, one, after I saw a client move off the platform in favour of a Wintel solution because they were running a Model 150 at V4R2 and what they were quoted to move forward scared them off. If I had been allowed to discuss with them another solution to move forward by only purchasing new hardware and software licenses and then moving the data over, it may have kept another shop on the 400. The second reason was the smiles on the faces of a client's IT staff after we successfully migrated them from a Model 250 at V4R4 to a Model 520 at V5R3 and despite being on a tight budget they were still able to afford the services. The smiles came from knowing that they were not

going to have to move to a Wintel solution and the amazing difference in processing speed they were seeing on the Model 520.

As of this writing, V5R2 and V5R3 are the only supported versions of OS400 and upgrades from V5R1 are the only supported/documented upgrade paths. How many of us are still on V5R1? How many of us are still on V4R1, 2, 3, 4 or 5 or earlier? If you're on V5R1, you're in luck in that you can still find the documentation required to move forward. Look here http://www-03.ibm.com/servers/eserver/support/iseries/index.html for the information you will need. However, if you answered yes to V4RX or earlier RISC system, then you are going to have to do some serious research, careful planning and hope that your network of contacts can help you find all the required pieces.

Garth Tucker (after becoming a nerd)

iSeries Release Upgrade and Support Information

Release *	End of support	Upgrade to V5R1	Upgrade to V5R2	Upgrade to V5R3
V4R5	31 Dec 2002	Withdrawal date 21 Nov 2003	Withdrawal date 01 Oct 2005	
V5R1	30 Sep 2005	-	Withdrawal date 01 Oct 2005	Withdrawal date to be announced
V5R2	To be announced	-	-	Withdrawal date to be announced
I5/OS V5R3	To be announced	-	-	-

* Upgrades from previous software releases not shown in this table are no longer available.

Now that we've established the fact that we're all not on the latest releases of hardware and software, what can we do to move forward?

In my experience, there are several options to get moved forward and all of them have pros and cons and associated price tags. Now keep in mind that as far as I know, some of the options I am going to discuss are not supported paths from IBM as, according to http://www-03.ibm.com/servers/eserver/support/iseries/planning/software/i5osschedule.html,

I don't presume to speak here for IBM, but I'm sure that they will help you move forward, so please don't take the impression from this article that IBM is not in your corner in this process.

If you contact them or your IBM Business Partner, they will give you their opinion and answer. There is a great Redpiece available from the IBM ITSO, "i5/OS V5R3 A Guide to Getting There from Previous OS/400 Releases" written by Nick Harris and Ian Mills that details a lot of the steps required to migrate forward.

Now to look at the options I have experienced and hopefully will help you get on to that new i5 you've been dreaming about while waiting for your batch processing to complete.

Let's look at a little background information here to understand the implications.

First, we can't, as a rule, jump more than one release during an automatic OS upgrade. For example, if we want to move from V4R4 to V5R2, a stop at V5R1 is required or a move from V4R5 to V5R3 would also require a stop at V5R1. This is to allow paths for IBM objects to be generated during the pre-upgrade tasks.


Second, before making any plans for the upgrade, obtain and review the Memo to Users and PSPs for all the releases involved. This could prove a little difficult, but a search through the Internet should help you find what you need. As with any OS upgrade, be very mindful of PTF implications and hardware compatibility issues. You will most likely have to activate your network of contacts to help supply materials unless you're extremely organized and have been squirreling away every bit of documentation ever released.

Third, there have been changes in the way that the OS handles functions and you need to ensure that your applications will work correctly when you get where you're going. So you must work with your developers and/or third party software providers.
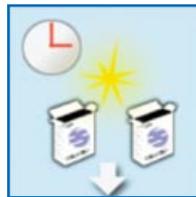
Fourth, a simple thing that is often overlooked in V5R1 upgrades I've seen is a change to the startup program to not start TCP/IP in the CL, as it now handled by the OS. Just a simple "gotcha" that is relatively harmless, but something you need to do.

Lastly, a big "gotcha" to be aware of is the object conversion that is required at V5R1, this is critical and needs to be taken into account in our project planning. You will take a hit on the initial IPL when the database/spoolfile conversions happen, so have a book ready to keep you occupied. The remaining object conversion can be submitted using SBMJOB – STROBJCVN *ALLUSR *FILE and will run in the background without too much interference with other tasks.

These notes only scratch the surface of the things you must be aware of when contemplating this upgrade, but some research will provide the rest. Careful planning is a must when contemplating a high-risk upgrade such as we are discussing.

Okay, let's get down to the options to get from V4RX to V5R3 on new hardware. We will not delve into upgrades where we are staying on our existing supported hardware, but suffice it to say that most of what we are discussing is relevant, except that the RISC-to-RISC process will not work for us and we are going to experience more pain in required outages. In my experience there are three options for the subject of this article and here is a brief overview of each one. Each of these will work provided you don't make any mistakes and I cannot stress enough that all of these require A LOT of detail oriented planning to be successful.

Option 1 – The "Proper" Way

To do this would require the media for the OS and PTFs for all the releases you will need to stop at during the upgrade and keep in mind that if you get stuck with an error on V5R1, it is a non-supported OS level. We have already seen an outline of where you will need to stop depending on where you are now. e.g. If you're at V4R4, you need to stop at V5R1 and then on to V5R2 or V5R3. This option is relatively safe in that these OS upgrades are well documented and there are plenty of people who can offer you advice on them. The biggest issue will be locating the media required. I cannot tell you where to find this, it will require you to find this media yourself and then take your own risks accordingly.

Option 2 – The "Safe" Way

In this scenario, we would only migrate our data from the current system. So we would have to look at re-keying our system parameters, users and other OS customization. We would need to have current releases of our third party software as well as licenses for it or ensure that it's supported on the new OS release if what you have is the most current. We also need to look at our peripheral devices to ensure they will still work with the new hardware and OS. The downside to this would be the cost associated with getting all of your system parameters re-keyed after you printed them out from your old system.

Option 3 – The "Fast" Way

This may entail doing things that are not strictly supported by IBM and I do not take any responsibility for your results. However, I discuss this in case you do not have the outage window or budget to follow one of the previous options. You could utilize a quasi RISC-to-RISC migration. This involves saving your system and then restoring selected parts of it using the RTVSYSINF/UPDSYSINF commands. These commands save and restore the parts of your system that make it "your" system.

A true RISC-to-RISC migration from IBM is as follows: The #0205 RISC-to-RISC Data Migration specify code is used when a customer orders a new server to replace an existing RISC-based server. This feature code ensures that the target server is set up for the data migration and entitles you to run the new operating system on both the source and target servers for a maximum of 70 days so that you can complete the data migration.

You must reinstall the previous operating system on the source server after the data migration is complete. IBM manufacturing loads the System Licensed Internal Code (SLIC) through QSYS of OS/400 when the #0205 specify code is ordered. This limited code load allows data, profiles, user interface customizing and so on to be moved from the existing server to the new server with less effort. Using the #0205 specify code means that any new and additional software that might preloaded by IBM is now loaded by the customer after the information from the original server is moved over.

Testing

All of these methods would be made safer and easier by having access to a test system to move forward on and I would highly recommend you find one and test prior to going live. Your business partner or IBM could more than likely help you out with this and find a system suitable to your needs. Your production system is not the place to be performing untried and unsupported upgrades or as my good friend Gary would say "Don't try this at home kids" as your actual results may vary.

Another great resource to look into upgrade paths can be found on this IBM site: http://www-919.ibm.com/servers/eserver/fact/welcome.htm. Click "Upgrade". It will help you determine if your upgrade is supported.

The most important thing to take from this article is the fact that the system that has been running your business successfully for so long that the OS and hardware are no longer supported tells you that when you go to new hardware and latest OS, you will have just as many years of trouble free service. BUT, we're not going to fall this far behind again are we! **TUG**

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