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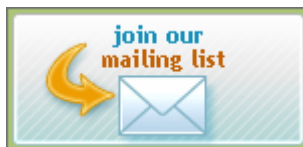
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Dear Pete,

Are you getting the most from your System i (AS/400, iSeries, and/or i5)? Let us help you with any of your System i needs. This issue of our newsletter has four articles. In the first, we discuss i5/OS V6R1 and issues that you will face with the upgrades. As you should be keeping up to date with Program Temporary Fixes, our second article covers which PTFs you need, how often to install PTFs, and what are the current PTF group levels. The third article is Backup and Recovery. While you backup every night, are you backing up the right stuff, and do you have everything if you need to recover. Our fourth article explains managing the availability of your system, and what you need to do if you require more uptime, or if you need to provide your users with 7x24 availability to the system.

iTech Solutions can help you improve performance, upgrade OS/400, perform security audits, implement a High Availability solution, VoIP, Systems Management, PTF management, upgrade an existing machine, or upgrade to a new machine. If you are thinking of LPAR or HMC, then think iTech Solutions.

We have the skills to help you get the most out of your System i. For more information on any of the articles below, please contact us at info@itechsol.com. We would also like to know what you think of this newsletter and any items you would like us to discuss in future issues.

 **i5/OS V6R1 available March 21**

IBM announced on January 29th, that the next

version of i5/OS, V6R1, will be available on March 21st. We listed many of the exciting new features in last month's article, if you would like to read last month's newsletter, you can go to our newsletter archive [Prior Newsletters](#) .

Some additional features we might not have been able to discuss last month, including additional details.

Virtualization of i5/OS Storage: Reduce costs and simplify creation of i5/OS test and development environments through storage virtualization from i5/OS or VIOS. Requires Power 6 machine.

Storage Space Snapshots: Improve availability with backup of virtual i5/OS, AIX, Linux, and Windows environments while they are active.

File level backup for Linux: Improve availability with i5/OS-based file level backups of Linux running in partitions or on integrated servers.

Integrated server enhancements: Reduce costs of server farms with enhanced iSCSI-based integration with BladeCenter and System x servers with support for VMware VMotion.

Support for JS22 Blade: Enable consolidation of i5/OS and x86 servers with an IBM BladeCenter solution.

Encryption: Meet regulatory requirements by protecting data at rest and backups of critical business information through advanced encryption.

Intrusion detection and prevention: Improve application availability with enhanced capabilities to detect and respond to web-based attacks.

IBM Systems Director Navigator for i5/OS: An integrated, easy, web-based management environment for i5/OS.

Performance Data Investigator: Enhance analysis of performance data with new web-based performance data viewer.

Performance Support: Support more transaction per second for Java and WebSphere applications with i5/OS V6R1

enhancements.

IBM 64-Bit JVM Enhance portability for ISV applications and improve performance of Java applications with IBM Java technology.

Integrated Web Application Server: Simplify deployment of Java applications with built in web application server.

Integrated server enhancements: Reduce costs of server farms with enhanced iSCSI-based integration with BladeCenter and System x servers with support for VMware VMotion.

New database functions: Enhance application functionality and performance with new database functions and management tools.

OmniFind Text Search Full text document searching through DB2

This is probably one of the most feature and function rich releases in the last ten years. One of the potential issues that will affect your upgrade to V6R1 is when you upgrade to this new release, ALL of your programs will have to be re-encapsulated. As long as your programs have observability or were created after V4R5 of OS/400, then you will have no problem. Otherwise, you will need the source to recompile the program.

We have been doing the analysis for V6R1 on many systems this past month, and there are quite a few packages, some very popular packages, that have issues going to V6R1. Now is the time to make sure you won't run into problems by insuring that all of your programs can be converted to V6R1. We can help you analyze your system so that you know which programs will cause you problems, and contact the vendors to get new copies of the programs.

iTech Solutions has been performing analyses for our customers' systems over the past few months, showing them which programs are problems, and giving them ample time to figure out how to resolve this. Let us come in and analyze your system and provide a report for you on exactly which programs

have issues. This way, you can start to get these resolved before you need to upgrade to V6R1. Remember, if you don't have creation data for the program to be recreated at V6R1, it will not run. Let's make sure these are not your mission critical programs that will have problems.

PTFs: Program Temporary Fixes

These are fixes or patches that IBM creates to fix problems that have been uncovered in the System Licensed Internal Code (5722-999), in the Operating System itself (5722-SS1), or in one of the Licensed Programs (i.e. Client Access, TCP/IP, or SQL to name a few). IBM distributes these fixes in many different ways, via Cumulative Packages, Group PTFs, or individual fixes. Let's examine each of them. Individual fixes are just that: an individual PTF to fix one particular problem. These can be ordered through fix central or using the i5/OS command SNDPTFORD. Every few months, IBM takes hundreds of PTFs and puts them into a Cumulative PTF package, sometimes referred to as a "Cume-Pack". You should be putting these onto your system quarterly. Group PTFs are specific PTFs put together for a certain function. For instance, there is a Backup and Recovery Group PTF, a Database Group PTF, an ECS Group PTF, and many others. You should go through the list of groups and determine which groups relate to you, and then install these groups as well when you do your quarterly cumulative PTFs. There is one group of PTFs called the Hiper Group. This is made available every 2 weeks, and it contains all the High Impact PTFs. These are PTFs that IBM recommends that you have on your machine for maximum stability. Here is a listing of the latest groups for V5R4. You can do a WRKPTFGRP and compare the results of your machine.

Group	PTF	Level	Description
	SF99540	7282	Cumulative PTF Package

SF99539	63	Group Hiper
SF99504	14	DB2 UDB (Database)
SF99347	16	Print Group
SF99316	4	Electronic Service Agent
SF99315	7	TCP/IP Group
SF99291	12	JAVA
SF99114	11	IBM HTTP SERVER

There are similar groups for other releases, but if you are not on V5R4 of i5/OS, call iTech Solutions and let us help you get to V5R4.

If you are not on the latest Cumulative PTF package, it's easy to find the level of yours, and determine if you are far behind. The level of the Cumulative PTF package can be decoded as follows: the first digit is the year, and the next three digits are the Julian Day. In the example above, 7282 would be Oct 09, 2007.

iTech Solutions can perform all of your PTF maintenance for you. Just give us a call, and see how simple having iTech Solutions do the work for you can be.

[Contact iTech Solutions](#)

i5 Backups and Restores

Everyone does backups each and every night of all their Data, correct? Well not everyone. In fact, most are missing quite a few important pieces to even be able to recover their system. Recently, while doing some audits of customer's backup procedures, we have found that the customers weren't backing up everything they thought they were, and in some cases actually had no idea what was required to back up.



At one customer, a backup program was written a few years ago, and it was backing up their production libraries at the time. The customer then did a release upgrade of their ERP application which changed the name of their production library so then their production library wasn't getting backed up each night.

In addition to missing libraries, we see many customers not backing up the IFS at all. With more and more "stuff" being placed into the IFS, you need to make sure these directories are being backed up. Here is some code to backup your IFS if you aren't.

```
SAV DEV('/QSYS.LIB/TAPxx.DEVD') OBJ((/'*) ('/QSYS.LIB'  
*OMIT) ('/QDLS' *OMIT))
```

The question becomes are you backing up the right stuff? Are you backing up everything you need to recover? How often is enough? Do you know where all of your tapes are? When did you do your last full system save? Do you backup your security data every night?

While you only need to do a SAVSYS after you have applied PTFs or after an i5/OS upgrade, it's the first piece of information that we need to recover your system. You will also need either a SAVLIB *NONSYS or a SAVLIB *IBM to restore the licensed programs. Then save all of your libraries, any DLO objects, and the IFS. Knowing what each of the save commands save is extremely important.

When it comes to restoring your system, do you have all the pieces of the puzzle? Are there pieces of your system on many tapes? Where are all of the tapes? Is there a procedure in place to restore the system? Do you have logical files over physical files in different libraries? Have you ever done a restore? These are just a few of the questions we ask when we come in to analyze your ability to restore your system. Just doing the backups is only half of your job. You need to just put down this article right now and run through the following exercise. I just lost

two disk drives and will need to rebuild my entire system from scratch. Can you recover? What are the steps? Where are the tapes? What is on each tape? Have you backed up enough information to even recover?

Let iTech Solutions provide you with an analysis of your current backup and recovery procedures or create them if none are available. Let's work together to analyze your machine and determine if you are backing up the right stuff to recover. After all, if you can't recover your machine, whose head will roll? [Contact iTech Solutions](#)

Managing Availability

What if there is just too much data to backup each night? Several customers have told us their backup window just isn't long enough. They have more and more data to backup, yet their backup window is shrinking due to additional demands from the business for availability. Yet, you need your backup for peace of mind and the ability to recover your system. What happens to your business if there is a disaster in the computer room? We have the issue of not enough time to backup the system each night and to balance with issue of how long can you afford to be down if a disaster was to happen. If the problem is just growing volumes of data with less time to complete the backup, then converting to a new tape drive might be a quick and simple solution. We recently upgraded a customer's tape technology which cut their backup time by 80% each night.

What happens if the problem isn't just the backup window? Perhaps your System i needs to always be available as you run three shifts in manufacturing or the warehouse, or you have a web application that needs 24x7 access to data. What would happen if the System i had a major hardware failure and is unavailable for 24 to 48 hours? How would your business operate? Would you be able to recover? Would you even lose your job as you weren't

prepared for a disaster?

That is when we start talking about logical replication of the data and programs. You may have heard the term High Availability. This is where we replicate any changes to the data and objects to another System i as they occur. The price of new hardware and the High Availability software to do this has come down so much in recent years, that this is now within all companies' reach. When you examine the cost of High Availability, don't look at what it will cost to implement. Look at the cost of the business being unavailable for a period of time. When you realize the cost to the business to be down, and you can easily see the value of having a replicated system that is ready to go in an instant. It becomes an insurance policy, as most businesses can't function without their computer systems. If these two computers are located in different locations, you are now protecting yourself against power outages as well.

[Contact iTech Solutions](#) and schedule a time when someone can come in and discuss how High Availability and replication can save your business, provide additional system availability to your users, and be the start of a great disaster recovery plan. We can also help you increase productivity, and provide a wealth of new functions, features and benefits all with a very quick payback. [For additional information](#)

Our staff of Certified i5/OS professionals can help you get more out of your machines. Remember, i want everything to work.

i want control.

i want an i

i need iTech Solutions.

Sincerely,

Pete Massiello
iTech Solutions

iTech

Solutions Group, LLC



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