



## maxRecovery Recovery and Backup

Back up and recovery are arguably one of the most critical functions we have to manage on the iSeries systems. Without the ability to recover in the event of a disaster we simply dare not use the systems for any business critical functions.

Without maxRecovery there are basically three approaches that can be taken for your back up strategy:

- Save everything every night;
- Save everything on a less frequent basis and save the critical data libraries every night;
- Save everything on a less frequent basis and save everything that has changed every night.

Each of these approaches have their good and bad points in terms of application availability, programming maintenance required and ease of operation, and each is a reasonable approach to adopt so far as back up is concerned. None of them, however, provide a good, easy, reliable and fast full system recovery strategy without considerable manual input, and only the first is a practical solution when it comes to partial system recovery.

### Business Benefits

If your system is down for longer than it needs to be then your business is suffering. Both backing-up and recovering data can be a time consuming task unless it is automated.

The back up strategies you can choose from are basically no different from the choices you would have without using maxRecovery. The product will support

whichever approach you choose, automate the process and also provide benefits in several areas. Tape usage is automatically tracked and catalogued, no program maintenance is required, the backup jobs are submitted automatically by the built in scheduling function and major improvements in your recovery strategy are provided with very little initial setup.

Each backup produces reports detailing the libraries that have been saved and the tape volumes used. If the object level catalogue is being used this report also identifies all the objects which have not been saved if the job fails to execute normally. This function is invaluable in calculating our exposure when a backup fails, allowing you to decide whether you need to correct the error immediately or if it is acceptable to continue normal working. To investigate this by other means could take a great deal more time.

If the back-ups are run and catalogued successfully then you can be reassured that the recovery process will be a very simple and easy one. Once the recovery process is started it will inform the operator which volumes are required to be mounted. With several recovery scenarios fully documented after each backup you can be reassured that maxRecovery will have you up and running in no time.

## Technical Benefits

Whether you choose to save everything or a restricted list of libraries with maxRecovery, the specification of your requirements is very straightforward. One of the advantages of the system is that, if you choose a restricted list of libraries, you can also include any new libraries automatically. Obviously if you choose to save everything the new libraries are automatically included. This will ensure you save those new things that you have not yet made a strategic decision about. This ability to take a 'fail safe' approach is one of the features of maxRecovery, which makes particularly suitable for any installation.

Each save procedure in maxRecovery can also initiate other functions both before and after the save is executed. This gives you the ability to prepare the system for saving, by holding job queues or ending interactive subsystems, or to make the system ready for normal operation, by releasing job queues and restarting subsystems after the save is completed. There is no restriction on what these commands can do, or the number of commands you can execute, because of maxRecovery's flexibility.

The level of cataloguing can be adjusted if required: a library level is always kept, a requisite for the automated recovery procedures, but you can also request an object level catalogue to aid in a partial system recovery.

The object level catalogue in maxRecovery also allows you to take advantage of the 'Protect Latest Versions' function. This function could be of major benefit on some of your libraries, as it will ensure that the product does not overwrite a tape that contains the latest off-lined version of an object. This situation would rarely arise but could be disastrous if it does, and very difficult to prevent without maxRecovery.

The scheduling of back up jobs is based on a cyclic approach which is used to determine the times and dates the back ups should run, how many sets of tapes are required, and when the tapes are reused. These cycles are easily defined and adjusted.

This module shares the scheduling and run book functions with maxScheduler, so more complex schedules could be used if you utilise both applications.

The job submission times are calculated by the product and the 'Real Time Run Book' is updated with the forward plan for the future. This gives us an extremely easy way to view what is going to be submitted in the future, all the jobs appear, in submission order, on a display screen. This has always been a bugbear with the native iSeries scheduling capability. This Run Book is maintained automatically every time any scheduling information is changed.

Several useful inquiries are available from the run book, access to the catalogue for completed back up runs is provided, as is access to the list of tapes required for a future back up. With maxRecovery's flexibility it is a simple matter to change the time for any individual submission of a back up job in the Run Book without having to reschedule and then undo the change after the job has run. This would be very advantageous, especially when you consider that we don't have to be there to initiate the job any more.

The catalogue can be maintained at the object level if required and consists of a record of what has been saved on the tapes and when. It can be viewed from many different perspectives, by object name, library name or save run, and drill down facilities are offered to find members in files, objects in libraries and tapes on which an object may be found. Restore options are available at each level. This makes maxRecovery extremely useful in partial system and individual object or file member recovery situations.

maxRecovery is based on the catalogue as what maxRecovery refers to as 'System Restore Groups'. These groups are user defined and basically specify the sequence in which we wish to restore the libraries in a system recovery situation. It should be borne in mind that this sequence is also used, by default, in the save routine to aid in the speed of recovery.

The definitions of the restore groups, together with the library level catalogue are automatically saved at the end of the save run. This gives you the ability to use the products' automated recovery functions, which begin with the simple restoration of these pieces of data and a few programs, which have been saved with them. You are effectively predefining your recovery strategy to maxRecovery, and then loading onto your disaster recovery machine so recovery can be automated and therefore quicker and more reliable.

Built into the product is the ability to perform any and all restricted state tasks in an unattended mode. Previously these tasks have required either out of hours attendance by operators, system down time during working hours, or they have not been performed as often as should have been. maxRecovery would make it much more likely that best practice is adhered to in this regard.



For further **information**  
contact our sales team on  
**01285 862 100** or email  
**info@apsu.com**