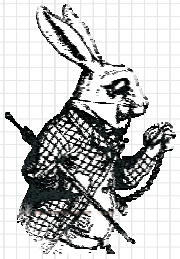

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Mainframe Catalogs: the untold story

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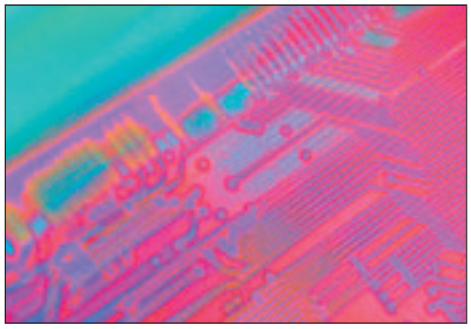
On a Windows PC everything goes through the Registry: whenever you want to run an application the registry has to be referenced. This is, in simple terms, exactly what a catalog does under MVS or z/OS: all datasets are accessed via an ICF catalog.



However, there are two big differences between a catalog and the Windows registry. The first is that mainframes are supposed to support high availability 24x7 environments, while PCs are not. The second thing is that you can have multiple catalogs on a mainframe.

But there is one more similarity between a registry and a catalog: they both get damaged and they both break. Worse, catalogs are breaking more and more often. And, even worse than this, most companies are not even aware of the problem—very few companies consider catalogs when they build disaster recovery plans, for example, and they are leaving themselves exposed to very serious potential consequences if they do not.

There are several underlying reasons for this problem. The first is that you cannot, using IBM's native facilities, re-distribute datasets across catalogs without taking the original catalog down for a prolonged period, which most companies cannot afford to do. Moreover, though IBM does provide the ability to split catalogs, it can only do this if the catalogs are clean. But, in order to ensure that catalogs are clean you need a diagnostics facility that will generate fixes for you.

The result of all this is that it is very rare for companies to create new catalogs and, even when they do, the majority of datasets still go through the first of those catalogs. Indeed, it is typical for tens and even hundreds of thousands of datasets to be going through a single catalog.

This creates problems of its own: a greater and greater strain is placed on the catalog, particularly for shared access requirements, control blocks and so on, which are being accessed by more and more applications. Further, performance is suffering (IBM never designed catalogs for these sorts of volumes) and IBM has been forced to introduce new code to enhance catalog performance, which is a threat in its own right.

Now, as I have stated, many companies are not even aware that this is a problem and, potentially, a very serious one. However, there are tools that are available that allow you to do on-line dataset re-distribution, split catalogs, diagnose and fix catalogs, and analyse the structural content of catalogs (which you need in order to help decide dataset re-distribution) and advanced back-up and recovery (IBM provides basic forward recovery capability).

The leading vendor in this space today is Mainstar, with its Catalog RecoveryPlus product. This has some 200 users worldwide and Ron Ferguson, the company's CEO, is the co-author of IBM's Red Book on this subject. However, you probably haven't heard of Mainstar because they haven't been big on marketing (at least outside the US). However, the company now feels that it really needs to be bring attention to the problem of catalog breakage to the wider market, as it poses such a threat to all mainframe-based high availability systems.

Philip Howard