T-REX Introduction: Catalog Management
Passionate About Your z/OS ICF Catalogs

Data Availability: The 21st Century Challenge?

Although many businesses may deploy the same hardware, software & sometimes even the same application solutions, data is the most valuable asset that differentiates one business from another. Equally the explosion of pervasive web based technologies has increased customer service requirements to near 24*7*365 processing, while the IBM Mainframe has always delivered the highest levels of system availability during its 40+ year history. However, does system availability always guarantee data availability?

ICF catalog structures are of fundamental & mission critical importance for your business. Logical failures (E.g. BCS, VVDS, Etc.) still occur, even for well managed Data Centres, whether large or small. Is your business prepared to recover data availability in minutes as opposed to hours or days?

The Data Storage Explosion

For many reasons, including customer based requirements, compliance & regulations, naming but a few, the data retained by our IT systems has been increasing rapidly since the mid-1990's, while current growth estimates are quoted at anything between 50-100%+ per annum. For the IBM Mainframe, the introduction of DFSMS (DFP Version 3) in the late-1980's introduced a *"thou shall be cataloged"* ethos for data storage management processes. Therefore our associated ICF catalog structures have also grown significantly, while their importance can never be under estimated. For example, even though the IBM Mainframe system could be available, could you still access all of your mission critical databases, whether DB2, IMS, IDMS, VSAM, et al, with a defective or broken ICF catalog?

The IBM Mainframe Charter: A Value-4IT View

In 2003 IBM announced their Mainframe Charter, which is a framework for planned future investment with the goal of delivering ongoing value to zSeries customers. The IBM Mainframe Charter guides the development of premier enterprise servers & the creation of technologies & offerings that help lower the cost of mainframe computing, via an "*Innovation, Value & Community"* ethos. Therefore "*delivering value for an on demand world*"!

Value-4IT fully embraces the IBM Mainframe Charter, continually striving to deliver affordable, strategic & value-added solutions for our rapidly growing customer base. For example, T-REX delivers:

- ***Innovation***: Providing early access to advanced & strategic functions such as BCS Reorg-In-Place & Dynamic Catalog Performance Management.
- ***Value***: A straightforward approach to software licensing with no term, upgrade or "small print" caveats, reducing TCO for both new T-REX & displacement customers.
- ***Community***: Zero cost option for eligible Educational & Research organizations, supplemented by limited cost options for the smaller IBM Mainframe installation.

To safeguard the longevity of the IBM Mainframe platform, IBM has set a benchmark for delivering cost efficient & innovative technologies to the IBM Mainframe community. Value-4IT feel that it's incumbent upon all ISV's to follow suit, hence their demonstrable & long-term commitment to the IBM Mainframe Charter, with cost-efficient & high function z/OS Systems Management solutions.

Class #	*Class Description*	*Unavailability (Minutes/Year)*	*Availability (System %)*	*Data Recovery Methodology*	*Windows Server*	*UNIX Linux*	*IBM z/OS*
1	Unmanaged (Not important)	50,000.0	90.0	Offsite tape (Transport)			
2	Managed (Operationally nice to have)	5,000.0	99.0	Onsite tape (Libraries)			
3	Well Managed (Operationally important)	500.0	99.9	Electronic vaults (ATL & disk)			
4	Fault Tolerant (Business vital)	50.0	99.99	Consolidation (SAN)			
5	High Availability (Mission critical)	5.0	99.999	RAID, SAN, Mirroring			
6	Very High Availability (Top security)	0.5	99.9999	Hot-site Remote mirroring			
7	Ultra High Availability (Homeland security)	0.05	99.99999	Self-healing systems			

For 40+ years the IBM Mainframe platform has provided the highest levels of System Availability, but could a damaged or corrupted ICF catalog structure impact data availability for your Mission Critical business systems?

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Dino-Software: A History of Catalog Management!

T-REX comes to you from the original Softworks developers who designed & delivered the "Mechanic" & subsequently "Catalog Solution (CSL)" over 20 years ago. By leveraging from their collective experience, incorporating modern design methodologies & associated technology, they delivered the latest strategic, state-of-the-art & cost efficient catalog management product available today, namely T-REX.

- ***1986***: Softworks deliver the first Catalog Management tool, the "Mechanic".
- ***1990's***: Softworks renamed product to "Catalog Solution (CSL)", which became the industry standard, generating several thousand global software license sales.
- ***2000***: Softworks were acquired by EMC for $192 Million, primarily for their CentreStage technology.
- ***2001***: EMC de-listed Catalog Solution from their price book, while the original Catalog Solution development team left EMC & formed Dino-Software.
- ***2002***: Dino-Software delivers T-REX, a cost efficient, easy-to-use & value-added Catalog Management product.
- ***2004***: Dino-Software ranked amongst the top 15% of fastest growing software vendors (ISV's). Dino-Software establishes EMEA presence, with many partners throughout the EMEA region.

A long-term history of delivering & supporting the latest technology Catalog Management software.

T-REX: Easy to Implement & Easy to Use

Today's IT support functions are quite rightly focused on delivering technical solutions for business challenges. T-REX is a software product that can be installed in minutes, while being supplied with many out-of-the-box sample job streams that quickly allow your personnel to gain from the benefits of advanced Catalog Management.

Historically, ICF Catalog Management might have been considered a highly technical & specialised activity, but T-REX simplifies such activities, generating extended function that can be easily deployed by less senior personnel, as & when required.

Additionally, by recognising the evolution of IBM Mainframe software utilities, deploying GUI interfaces, as well as the traditional 3270 Green Screen, T-REX has a TCP/IP interface that can be deployed on either a Windows or Linux based workstation. This console can then be deployed to submit T-REX jobs for IBM Mainframe processing & to subsequently obtain job output for review on the GUI workstation.

T-REX, delivers maximum value with minimum effort!

T-REX: Extended Feature & Functions Overview

Although IBM supply the Access Methods Services (AMS) functionality with the base Operating System (E.g. z/OS), this functionality generally deployed via IDCAMS can sometimes be both limited & slow. T-REX supplements & improves upon AMS based services, for example & naming but a few:

- ***Access Methods Services/Extended (AMS/E)***: Analyze, Audit, Delete, Diagnose, Display, DRimport, Examine, Export, ICFRU, Import, Integritycheck, Listcat, Modify, Print, Reformat, Reorg, Report, Repro & Zap functions.
- ***Parallel Processing***: Base architectural design to include parallel processing via dynamic & self-tuning multi-task activities, reducing elapsed time & increasing throughput.
- ***Continuous Availability***: Catalog availability is maintained via the "BCS Reorg-In-Place" function, allowing access & sharing, even in a SYSPLEX, for catalog reorg activities.
- ***Enhanced Catalog Sharing***: IBM utilizes Coupling Facility functions, sharing dataset/catalog information in a SYSPLEX. T-REX has always fully exploited this feature to ensure cross system VVDS update integrity. Processing the VVDS outside the Coupling Facility may result in loss of data & a defective catalog environment.
- ***Disaster Recovery Optimization***: T-REX provides the ability to dynamically redefine, restore & initialize ICF catalogs & VVDS's concurrently. T-REX allows you to selectively import BCS by criteria such as data set name, record type, volume, & devicetype, eliminating the requirement for time-consuming "scrubbing" activities. T-REX also provides sub-tasking capability for ultra fast "scrubbing"!
- ***Backup Integrity***: Data integrity is mandatory when recovering VSAM data sets & catalogs. T-REX bypasses index processing, deployed by standard utilities such as IDCAMS, DFDSS, et al, using VSAM record management & proprietary algorithms to selectively backup the object, safeguarding data integrity, even if the associated file index is damaged.

T-REX: Major Customer Benefits Summary

- An integrated, strategic & single product solution for extended catalog & VSAM management.
- Increased & continuous catalog data availability via reorg in place, parallel processing & data integrity functions, plus dynamic & self-tuning performance characteristics.
- Reduced TCO for catalog & VSAM management, from a company with a history of delivering such solutions.
- Easy to use & easy to implement, generating DR, personnel, CPU, disk & other infrastructure cost savings.
- A forward thinking, innovative & cost efficient software solution that embraces the IBM Mainframe Charter, with an "*Innovation, Value & Community*" ethos.

Dino-Software, passionate about your ICF catalogs!

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