IMS XRF Future

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Topics

IMS XRF History and Values
Sysplex as a replacement
Data
Network
Workload
Control

Topics

Notes

This presentation will discuss IMS replacement strategies for XRF features.

This is an overview of current IMS design strategy for sysplex implementation. It is NOT a guarantee of schedules or version content.

What is XRF

Notes

- XRF is a hot backup, dual active/passive IMS combination that was designed to provide hot takeover in under 60 seconds for single CEC type failures
  - Abends
  - Single processor hardware failure
- It has help from VTAM and MVS
  - VTAM USERVAR support allows network switchover in under 60 seconds
  - MVS can provide heartbeat detection assistance
- The XRF Alternate does in flight backouts and lock resolution by using information gained from continuously reading the Active partners log
- Databases are shared, queues are shared, and logs are shared (serially)
- Think of an XRF Alternate as a system in perpetual Emergency Restart

XRF Pros and Cons

Notes

- **Pro**
  - Fast transparent takeover of failing IMS system
  - Minimal operator intervention
  - Able to switch back and forth with minimal operator activity
  - Close to transparent to the end user
  - Considerably cheaper than a backup system using redundant transactions
- **Con**
  - Passive only system using MIPS without output
  - Not strategically aligned with VTAM VGR/MNPS directions
  - Has a number of single points of failure
    - bad log records, shared libraries
  - **Makes IMS internal more complex to write, test, and debug**

What next

Notes

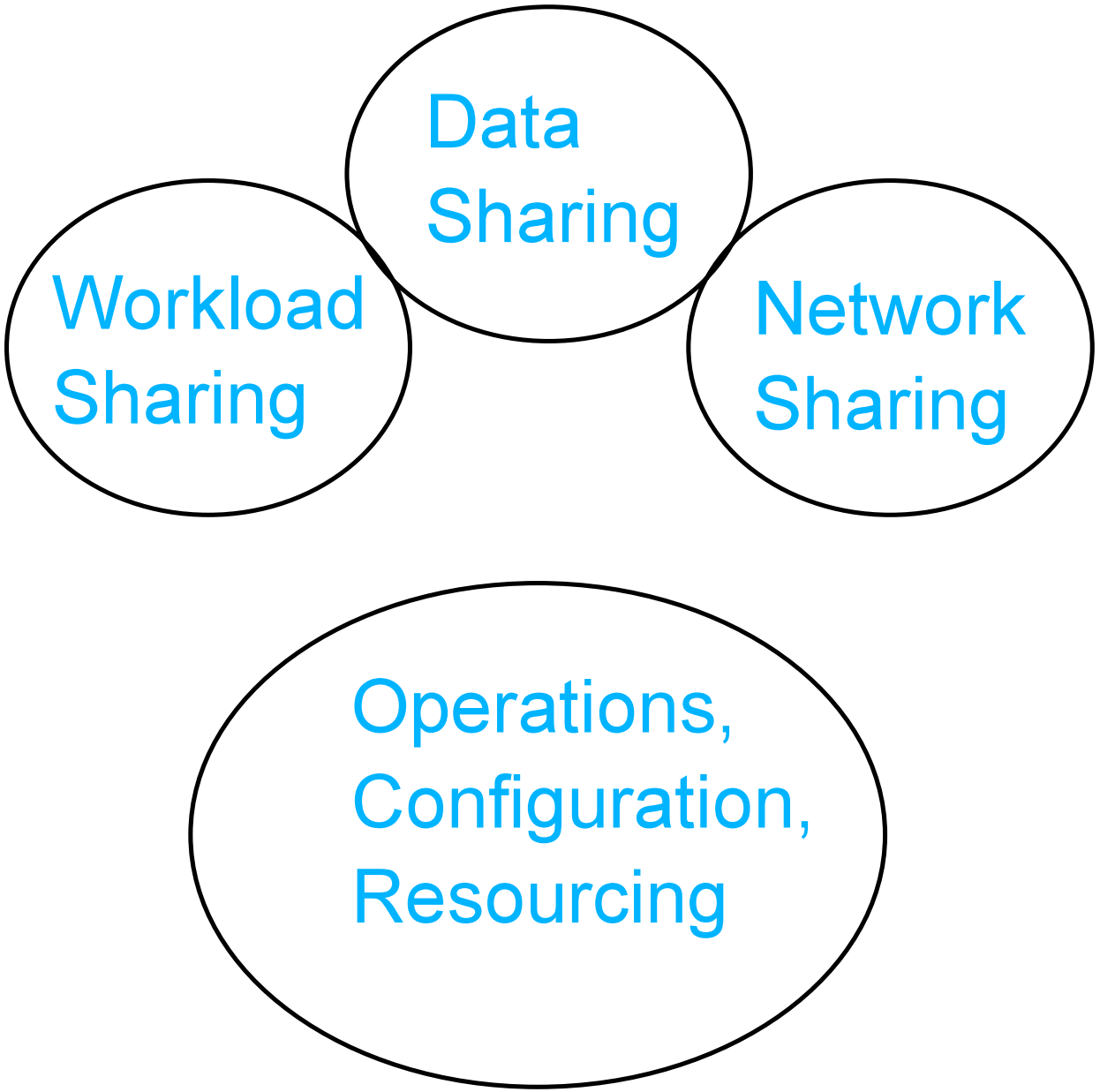
IMS plans to replace XRF redundancy with Sysplex redundancy

- More scalable
- Supports e-business environment better
- Equally transparent to end user
- All components are active and do productive work

When?

- When we equal or improve on XRF functionality and availability characteristics
  - Transparent to end user
  - Fast takeover of failing users and transactions
  - High reliability

Data, Workload, Network, Operations



Data Sharing

Notes

- First requirement - multiple active systems must be able to concurrently read and update DBs
  - Full function Nway data sharing provided in IMS Version 5
  - Fast Path data sharing for SDEPs and VSO provided in Version 6
- Data Sharing is already equal to XRF and further enhancements are aimed to improve availability
  - HALDB
  - Online Reorg
  - Schema change support

Workload Sharing

Notes

Initial delivery was IMS Shared Queues support in V6

Support for OTMA and APPC input to shared queues has been announced for V8

BMP restarts on a different system use available DM tool (Program Restart Facility)

FP local BALG support needs further function

Network Sharing

Goal is full transparency

- VGR required and partially implemented
- MNPS required and partially implemented
- Complete internal split between IMS TM and IMS DB is required.
- IMS State tracking is the major missing piece
- Split of IMS DB and IMS TM interfaces, especially in FP second major work item

Operations

Current complexity for operators, DBAs and system programmers is too high

Operations Management

Resource Management

Sysgen

Operations Management

Single point of control

Filtering support

Global command support

ENET was marketed by IBM as RRDF

Resource Manager

Notes

Sysplex wide repository for resource definitions and status

Start is in Version 8 but much more work to be done

Other peripheal funtions

Genless IMS

- allow IMS definitions through resource manager, parameter members

High capacity DBRC subsystem

- add recoverability, security, and especially parallelism for internal processing

When?

Notes

Version 5 - Nway datasharing

Version 6 - FP datasharing, shared queues

Version 7 - Part of VGR

Next - Start of RM, Start of OM, MNPS start, APPC/OTMA SHQ, Use of MNPS instead of USERVAR

Next - More MNPS, Configurable FE/BE, Local BALG, more commands using OM, more resources controlled by RM, DBRC parallelism, genless start

Next - SHQ required, Peer Recovery for trans

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