RAPID DATABASE RECOVERY IN A CRITICAL FAILURE SCENARIO

ORACLE DATABASE CORRUPTION RESOLVED THROUGH STRATEGIC RECONSTRUCTION AND PERFORMANCE TUNING

CUSTOMER PROFILE

HQ

Olathe, Kansas, USA

INDUSTRY

Higher Education

EMPLOYEES

400-500

ITC SERVICES

- ITC Emergency Services
- Oracle Database Recovery
- Export/Import Data Salvage Strategy
- Corruption Bypass and Workaround Engineering
- Post-Recovery Performance Optimization
- Disaster Recovery Advisory

APPLICATIONS & TECHNOLOGIES

- Oracle Database
- Rubrick Backup Platform
- Oracle Export/Import + Data Pump

INTRODUCTION

A leading university experienced a severe Oracle database corruption event impacting tables critical for storing all object metadata within the database. While the failure occurred during routine data center maintenance, the impact of the corruption did not surface until several days later as transaction errors during routine data entry.

Initial recovery efforts using standard backup tools proved unsuccessful; and the customer requested ITC Emergency Services to aid in recovery efforts. ITC immediately assigned a team to work with the customer to minimize data loss and return operations to normal as quickly as possible..

CHALLENGES

- Database corruption impacting business operations during admissions processing
- Failed efforts in database recovery utilizing standard functionality
- Inability to invoke recovery efforts on a DR environment
- Risk of substantial data loss and extended production downtime
- Delays with student admissions could severely impact timely receipt of tuitions

ITC ADVANTAGE

- Deep Oracle database internals knowledge to resolve low-level corruption issues
- Creative problem-solving approach when standard tools fail
- Cross-functional recovery expertise across infrastructure, database, and development layers
- Proven experience in working with Oracle Support and client-side application teams
- Emphasis on long-term resiliency through DR planning and validation protocols

SOLUTION

Through the Emergency Services framework, ITC immediately executed a multi-phased, intensive recovery plan combining traditional tools with creative workaround engineering:

- ***Root Cause Identification & Failure Analysis:*** Identified the source of the corruption to then triage with Oracle Support for assistance.
- ***Backup Strategy Assessment:*** Identified gaps within the backup policies and provided recommendations for immediate remediation while working the recovery efforts in parallel (existing backups were determined unusable for recovery efforts).
- ***Database Creation:*** Created a new Oracle database matching original configurations providing a backup plan in parallel to all other ongoing efforts.
- ***Data Salvage & Reconstruction:*** Exported data from the corrupted source using Data Pump to bypass corrupted blocks and create the new database.
- ***Workaround Engineering:*** Complete database reconstruction combining elements of data from multiple sources, ultimately restoring all components.
- ***Post-Recovery Optimization:*** Completed several configurations designed to optimize the production database.

RESULTS

- The production database was successfully rebuilt, free of corruption, and optimized for ongoing use.
- All critical data was imported into the new production database, and data loss was minimized.
- Cutover operations were executed quickly to return services to normal operation.
- Future recommendations were made as a result of all ongoing work to continue to optimize the production database and to facilitate disaster recovery operations.
- User confidence in the system was restored as a result of team efforts to restore and minimize data loss.