# Current Work

Currently working in Buffer Cache Manager i.e. BCM module of ASE.

ASE is Adaptive server enterprise, a RDBMS product of SAP.

BCM is responsible managing physical disk pages while they are in memory.

## HCR (High Connection Rate)

HCR (story, contribution)

- problem

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When database clients create new connections at a rapid rate, logins become slow due to ASE taking more time during connection creation.

Repeated scan on system tables (that are present in default datacache) cause slowness because of contention on buffer cache spinlock.

This scanning is required to determine role related for login. The redundant access on the read-mostly-write-rarely system tables

can be avoided by caching the tables in fixed size arrays.

How it is achieved?

1. 2 spinlocks created for 2 system tables

2. hook is created for enabling cache scanning / hcr feature

3. 3 states identified: role\_loaded, role\_loading and role\_reading; these are updated in resource\_systable\_variable

4. whenever role\_loading or role\_reading (and resource\_variable is not updated), thread is put on sleep.

5. Otherwise, scanning system tables and copying to cache is done.

6. After that, resetting role\_loading n role\_reading, role\_loaded is set.

7. In functions where system tables are updated, resource\_systable\_variable is reset to invalidate the cache.

## SDI DB2MainframeAdapter

HANA smart data integration (SDI) simplifies connecting and consuming data from multiple sources into HANA.

CDC (Change Data Capture) tracks and reports the changes that have occurred in your data source

since the last time you imported data from it. and enables you to update the

relevant targets in your data flows by applying those changes.

My contribution is after delta capturing logs from rep agent pushing data to HANA.

Tasks were like:

1. Get config file details and send to MF via ftp connection.
2. Received LTL data from Repagent, use parser to parse the same and push the data to queue.
3. On receiving data row, check format for each column value and convert it to HANA format.