

Meeting 12/13/17

Wednesday, December 13, 2017 11:00 AM

Agenda:

Goal: hand calculate block size

- Need to figure out the header size
- Tail size (check sum)?

Notes:

T size, H size

Row offset list is being counted twice

Block columns are ordered by cardinality, with the lowest cardinality inserted first.

A	A	A
A	B	B
A	A	C
A	B	D
A	A	B
A	B	B
A	A	D
A	B	C

A	A,B	A,B,C,D
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Made a token for:

AAA
AAB
ABC
ABD

Made two one-column tokens for:

A's
B's

372 rows in the block
2,943 blocks

How many tokens are created?

Attendees:

Everyone

More notes:

Fixed:

All blocks have a header that consists of block type, block format, relative database address, scn, scn sequence number, check value, tail

Relative:

Tail: used as a block consistency check.
The value must be equal to SCN + block type + SCN sequence number.

SCN = system commit number
SCN of the last checkpoint can be found in v\$database.checkpoint_change#

Header: 128 bytes

Tail seems to be 4 bytes

144 = header size that completes the function

Want to create more than 255 tokens such that the 256th token is two bytes instead of 1 byte long

FOR ORACLE 10g, we're using 12g

Block header =

Fixed header = 57 bytes
+ Transaction header = between 23*initransand 23* max trans
+ Table directory = 4 * #tables
+ Row directory = 2* stored rows

Are there different tokens for different

How many tokens are created?

How many tokens per row?

Tokens recursive? What level?

Are there different tokens for different blocks?

How does Oracle know how many rows to fit in a block?

How do you query an ITL?

Andy's hypothesis: cannot have a multibyte token because it's hard coded

Action Items:

Meet next Monday 12/18 with Andy

Need to know how many tokens it creates when compressing

Need to know why tokens are created

How do I figure out, based on number of tokens, how big the token table is? (should be same as uncompressed)

To figure out compressed block size: How big is the token and how many tokens are there

- Try to prove: block can't have multi byte token
- Try to prove: block can't have more than one token in a data row
 - o It can
 - o How does it know those are tokens and not data?