Extension package pageinspect

This extension package provide variety of functions to inspect the contents of database at a low level. And all of the functions can be used only by superusers.

I. General function

a. Read the information of the specified block.

```
get_raw_page(relname text, fork text, blkno int) returns bytea
get_raw_page(relname text, blkno int) returns bytea
/* This function is equal to get raw page(relname, 'main', blkno) */
```

b. Read the header information of page

page header (page bytea) returns record /* In this function, the parameter page based on the overhead function */ 23 select * from page_header(get_raw_page('test_idx',1)) Data Output Explain Messages Query History checksum flags lower upper special pagesize version prune xid smallint smallint smallint smallint ▲ pg_lsn smallint smallint smallint xid

512

8192

8192

4

0

c. Compute the checksum for the page

page checksum(page bytea, blkno int4) returns smallint

0

The checksum computed with this function can be compared with the checksum result field of the function page_header. If data checksums are enabled for this instance, then two should be equal.

504

d. Read the information of a page

1 44/E61EAF90

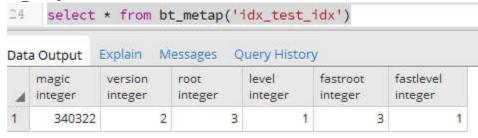
heap page items(page bytea) returns setof record select * from heap_page_items (get_raw_page('test_idx',0)) ta Output Explain Messages Query History t_field3 t_infomask2 lp_off lp_flags lp_len t_xmax t_ctid t_infomask t_bits t_oid mallint nteger iteger 61 53108846 8128 0 0 (0,1) 2 2306 24 [null] [null] [binary da 61 53108846 0 (0.2) 2306 24 [null]

- e. heap_page_item_attrs(rel_oid, t_data bytea, [, do_detoast bool]) returns bytea[]
 This function is similar with the overhead function except the t_data

Show the internal node structure of a FSM(free space mapping) page.

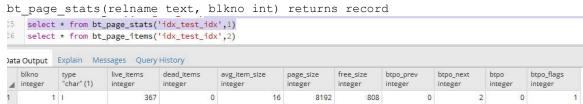
II. B-tree function

a. bt metap(relname text) returns record



Show the information about a B-tree index's metapage

b. show the summary information about single pages of B-tree



c. show the detailed information about a single page

bt page items(relname text, blkno int) returns setof record

26	select * fr	om bt_	page_items	('idx_te	st_idx',2)	
Data O	output Explain	n Mes	ssages Que	ry History		
À	itemoffset smallint	ctid tid	itemlen smallint	nulls boolean	vars boolean	data text
1	1	(6,13)	16	false	false	dd 0
2	2	(3,7)	16	false	false	6f 01

d. bt_page_items(page bytea) returns setof record

This function is same as the overhead function.

27	select * fr	om bt_	page_items	(get_raw	_page('idx	_test_idx',2)
Data O	output Explai	n Mes	sages Que	ry History		
	itemoffset smallint	ctid tid	itemlen smallint	nulls boolean	vars boolean	data text
355	355	(5,12	16	false	false	d0 0
356	356	(6,1)	16	false	false	d1 0
357	357	(6,2)	16	false	false	d2 0

III. BRIN functions

a. Show the type of the given BRIN index page

brin page type(page bytea) returns text

b. Show the information about BRIN index

brin metapage info(page bytea) returns record

c. Show the list of tuple identifiers in a BRIN index range map page

brin revmap data(page bytea) returns setof tid

d. Show the detailed information about BRIN index

u. Show the detailed information about bring index

brin_page_items(page bytea, index oid) returns setof record

IV. GIN functions

a. Show information about a GIN index metapage

gin metapage info(page bytea) returns record

b. Show information about a GIN index opaque area, like the page type gin_page_opaque_info(page bytea) returns record

c. Show information about the data stored in a GIN leaf page

gin leafpage items(page bytea) returns setof record

V. Hash functions

a. Show type of the given hash index

hash_page_type(page bytea) returns text

b. Show information about a bucket or overflow page of a HASH index

hash_page_stats(page bytea) returns setof record

- c. Show detailed information about the data stored in a bucket or overflow page of a HASH index page hash_page_items(page bytea) returns setof record
- d. shows the status of a bit in the bitmap page for a particular overflow page of HASH index hash_bitmap_info(index oid, blkno int) returns record
- e. show information stored in meta page of a HASH index

hash_metapage_info(page bytea) returns record