Upcoming PostgreSQL Features

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Abstract
This outlines the upcoming features of PostgreSQL 8.1.
PostgreSQL Evolution

Enterprise features include:

- Improved Performance
- Simplified Maintenance and Administration
- Efficient 24/7 Operation
Indexes Combined Using Bitmaps

Index a

Index b

Index c

1 1 0 1 0 0 0 1 1 0 0 1 0 0 0

d t p x y g m v b f k w u h c

Upcoming PostgreSQL Features
## Two-phase Commit

<table>
<thead>
<tr>
<th>Session 1</th>
<th>Session 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEGIN WORK</td>
<td>BEGIN WORK</td>
</tr>
<tr>
<td>UPDATE acct SET balance = balance - 100;</td>
<td>UPDATE acct SET balance = balance + 100;</td>
</tr>
<tr>
<td>PREPARE TRANSACTION 'balance1';</td>
<td>PREPARE TRANSACTION 'balance2';</td>
</tr>
<tr>
<td>COMMIT PREPARED 'balance1';</td>
<td>COMMIT PREPARED 'balance2';</td>
</tr>
</tbody>
</table>
Major Code Improvements

- Automatic vacuum moved from /contrib to the main server
- Global shared buffer lock removed, improves SMP performance
Functions Returning Multiple Out Parameters

CREATE FUNCTION f1(IN i INT, OUT j INT, OUT k TEXT) AS $$
BEGIN
  j := i+1;
  k := 'foo';
END$$
LANGUAGE plpgsql;

SELECT f1(42);

------
(43,foo)
(1 row)

SELECT * FROM f1(42);

j  | k
---+----
43 | foo

INOUT parameters are also supported. Use RETURN NEXT to return multiple rows.

Upcoming PostgreSQL Features
Shared Row Locks

SELECT *
FROM accounts
WHERE accno = 7823231
FOR SHARE;
The PostgreSQL Universe

- New companies in the USA since last year — Pervasive, Green Plum, EnterpriseDB, *Unisys*

- 1.5 million downloads of 8.0.X

- New users
Questions?