

Skytools 3.0

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 - Cooperative Consumers
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• Any question?

Where does Londiste comes from?

- Slony-I
 - Write load versus reliability
 - Network Topology versus flexibility
 - Only solves a subset of the problems
 - Shared some internal implementation (as txid_snapshot)

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Skytools Architecture

- in-database PGQ modules (C coded triggers)
- Skytools python framework
- PGQ python librairies, utilities to code consumers (daemons)
- Specific consumers, such as londiste
- Extra tools based upon the framework, such as walmgr

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What does that mean for me?

A flexible architecture allows

- Cross version and architecture replication
- Version and Schema upgrade support
- General asynchronous processing support
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PGQ Nodes

PGQ architecture has changed so that the queue themselves can be replicated from a node to another, to allow for online switchover facilities. That comes with 3 node types:

- Root
- Branch
- Leaf

PGQ Nodes

Example (qadmin status)

```
bdd2$ londiste3 demo.ini status
```

```
Queue: demo   Local node: bdd2
```

```
bdd1 (root)
```

```
| Tables: 85/0/0  
| Lag: 3s, Tick: 8706
```

```
+--bdd2 (branch)
```

```
| Tables: 85/0/0  
| Lag: 3s, Tick: 8706
```

```
+--web1 (leaf)
```

```
| Tables: 85/0/0  
| Lag: 3s, Tick: 8706
```

```
+ web2 (leaf)
```



Cooperative Consumers

PGQ is often used on its own, for general queuing needs that are not tied to replication. In some cases you want to have multiple consumers draining in parallel from the same queue, but *sharing* the work.

Includes failover. When a consumer stops consuming, its current batch gets reassigned to another one after a configurable timeout.



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qadmin

qadmin is the new interactive command line, replacing pgqadm and offering a much richer set of commands.

- connect, install
- create queue, alter queue, show ...
- register, unregister
- londiste commands

Londiste improvements

Londiste itself received some new features

- Execute scripts (DDL support)
- `londiste ... add -create`
- Parallel COPY
- Column granularity
- Online topology changes
- Custom handlers (*plugins*)
- Documentation...

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debian Packaging

Completely new for skytools3

- skytools3
- python-pgq3
- python-skytools3
- skytools3-walmgr
- skytools3-ticker
- postgresql-8.4-pgq3
- postgresql-9.0-pgq3



Upgrading PGQ

How to upgrade from PGQ 2 to PGQ 3

- Best way, do it on a new target database
- Upgrade PGQ schema
- Upgrade modules
- Upgrade to pgqd

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Upgrading Services

That's the easy part (thanks to compatibility)

- Daemons: the API is compatible
- Mostly: no more failed queue
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Now is a pretty good time to ask!