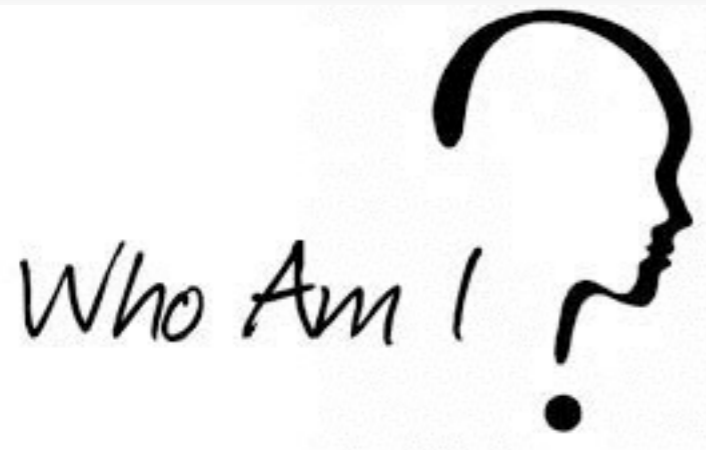




# PGPOOL II 3.5 enhancements

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About my  talk

# 3.5 Enhancements

- PCP Overhauling
- Watchdog enhancement

# What is PCP?

# Why overhaul PCP?

- Single instance
- Fixed command line arguments
- Security issues
- Poor error reporting

# New PCP

- Long command line options
- Multiple concurrent commands
- Easier to code
- Easier to maintain
- More informative errors
- PCP password is safe

# New PCP Commands

- Current command format

```
pcp_attach_node _timeout_ _host_ _port_ _userid_ passed  
nodded
```

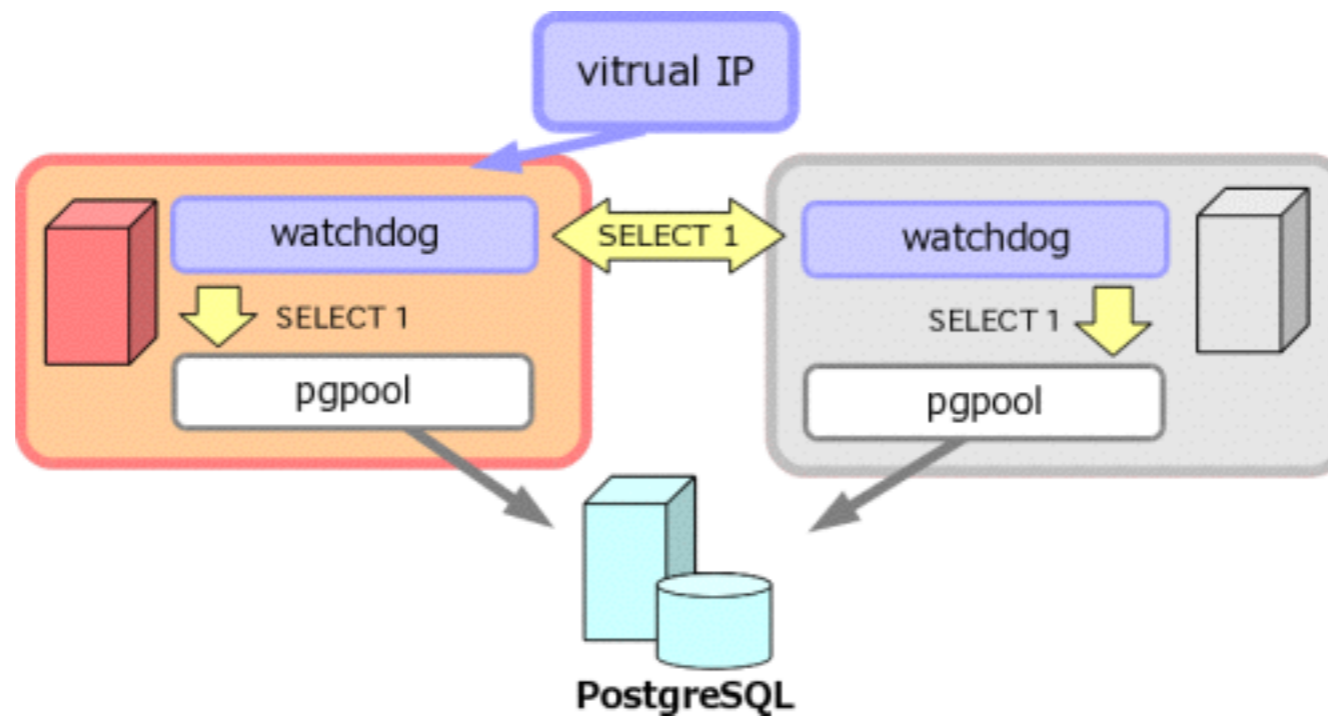
- New Command format

```
pcp_attach_node [options...] node_id
```

- All commands prompt for password
- -w, —no-password option reads password from .pcppass file



# Watchdog



# What is Watchdog?

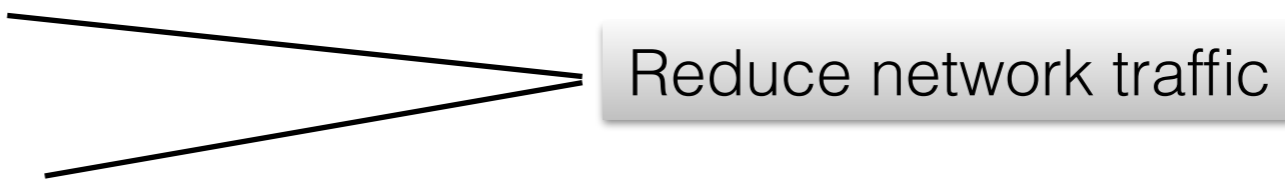
# Some common complaints with watchdog

- Only works within the single network
- Secondary pgpool-II server has different configurations
- Split-brain
- Can be easily misconfigured.

# Improvements areas for watchdog in 3.5

- Reducing network traffic
- Work across different networks
- More consistent configurations across all pgpool-II nodes
- More information sharing among the connected pgpool-II servers
- Recovery and guard against split-brain scenario

# Reducing network traffic

- More options for heartbeat
    - UDP uni-cast (Already present)
    - UDP multicast
    - UDP broadcast
    - TCP
  - More information sharing
    - Backend node health check by one pgpool-II server should be good enough.
- 
- A diagram consisting of two arrows pointing from the 'UDP multicast' and 'UDP broadcast' items in the list to a grey rectangular box on the right containing the text 'Reduce network traffic'.

# pgpool-II connected through watchdog should have similar configurations

- More consistent and expected behaviour
- Can work with external load balancer
- Master escalation will be more smooth

# Recovery and guard against split-brain

- pgpool-II must detect and recover from split-brain scenarios
- Configurable quorum settings to decide how and when the pgpool-II can be escalated to master

# Go beyond single network

- Heartbeat mechanism to support multiple networks
- Support different virtual IP addresses for master and secondary pgpool-II



# Thanks