Nanomsg

Few facts

Written by Martin Sustrik (co-creator of ZeroMQ)
MIT licensed
Release 1.0.0 release candidate(4 June 2016)
Release 1.0.0 release candidate #2(7 June 2016)
Version 1.0.0 Production Release(11 June 2016)

Advantages

Aims POSIX full-compliance
Written in C
API for integrating new protocols and transports
command-line tools (nanocat)

Really zero-copy

```
void *buf = nn_allocmsg(12, 0);
memcpy(buf, "Hello world!", 12);
nn_send(s, &buf, NN_MSG, 0);
nn_recv(s, &buf, NN_MSG, 0);
nn_freemsg(buf);
```

Nanocat

command line tool for testing and debugging purpose
provides many symlinks to simplify user interfacesupports msgpack

Nanocat (sample)

```
# server-side
nanocat --rep --bind tcp://127.0.0.1:8000 --format ascii --data pong

# client side
nanocat --req --connect tcp://127.0.0.1:8000 --format ascii --data ping
```

Nanocat (sample)

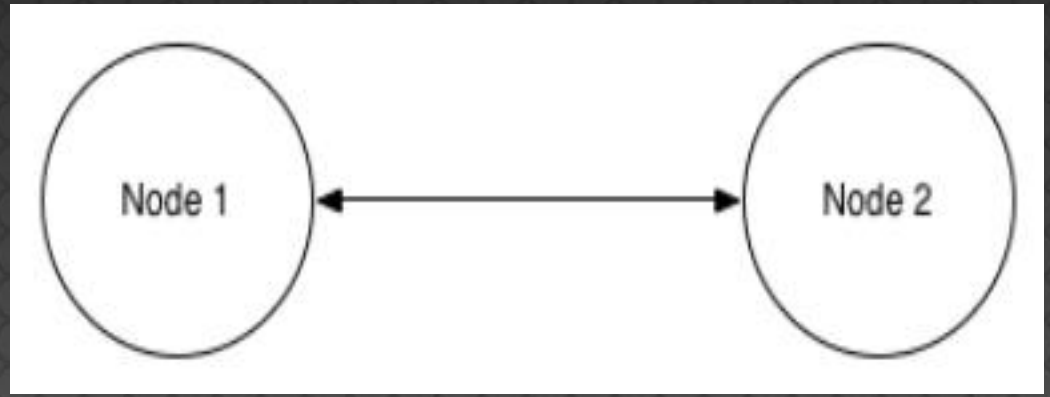
```
!bash nanocat --pub --connect tcp://darthsidious --data "My liege !" --interval 10
```

Transport

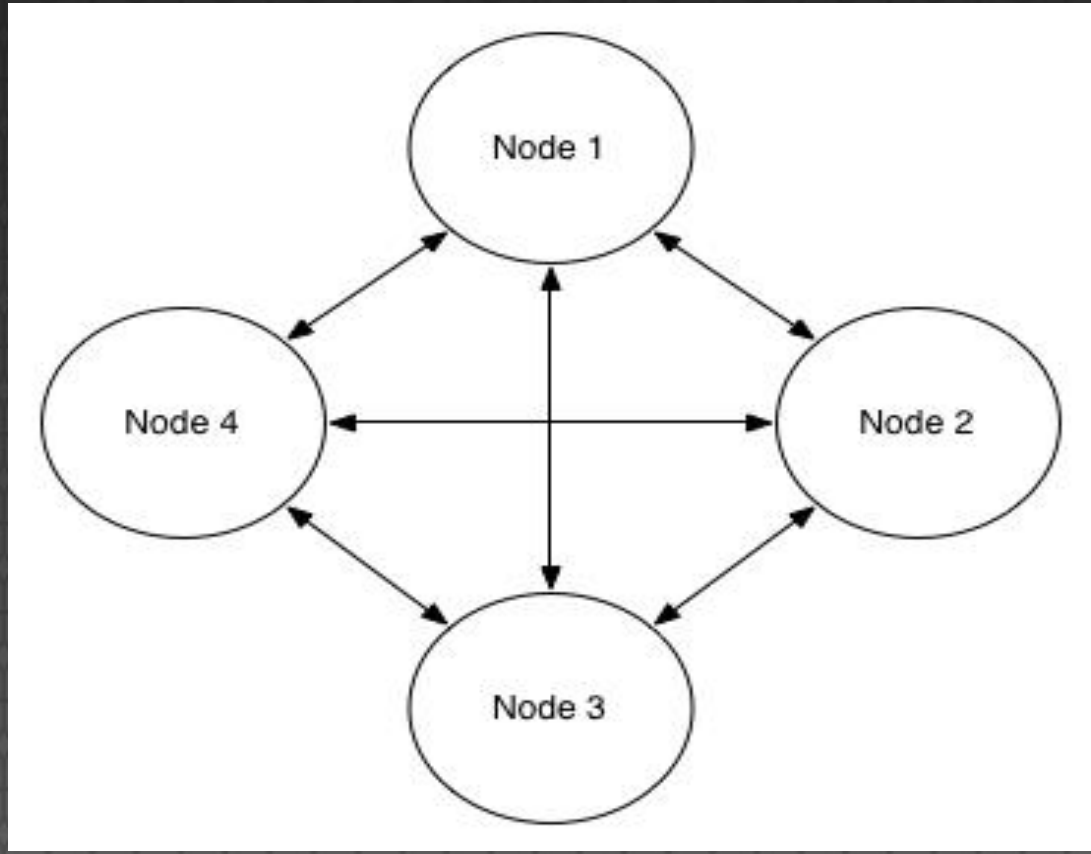
- INPROC - transport within a process (between threads, modules etc.)
- IPC - transport between processes on a single machine
- TCP - network transport via TCP
- WS - WebSocket protocol

Protocol

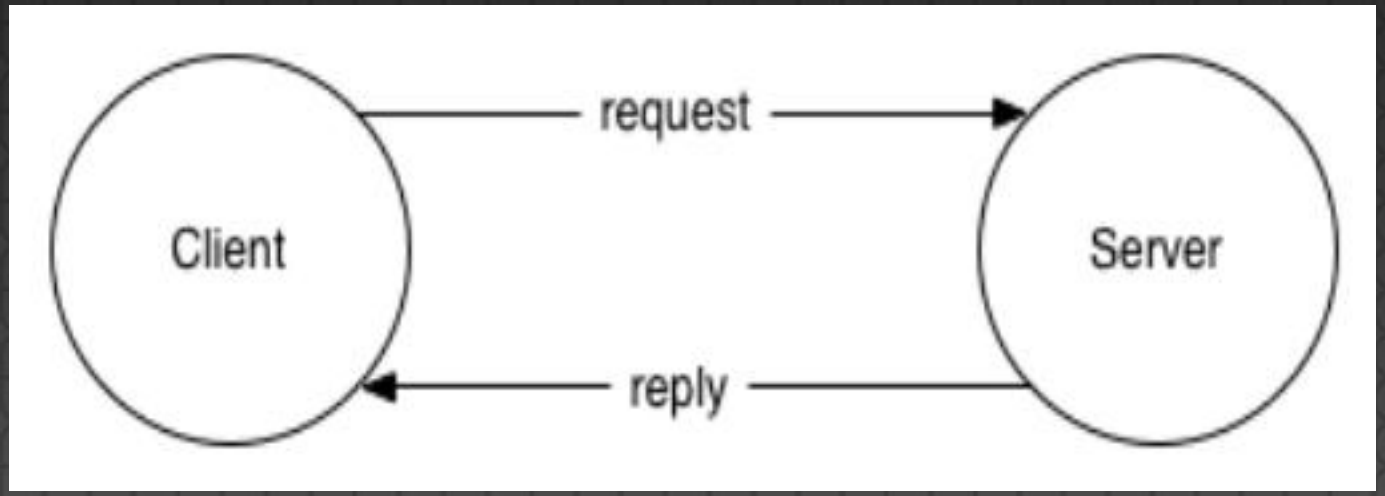
Pair



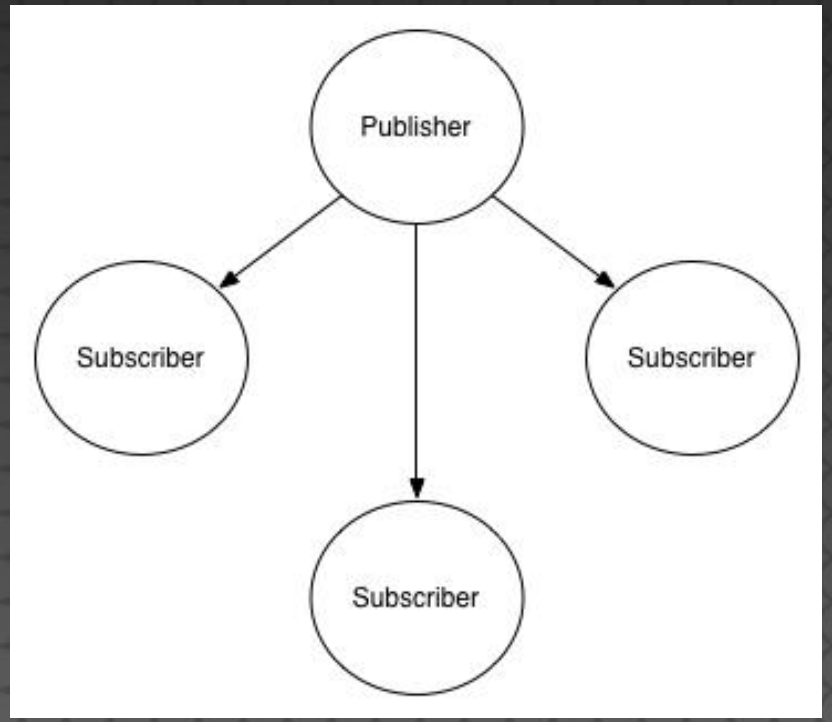
Bus



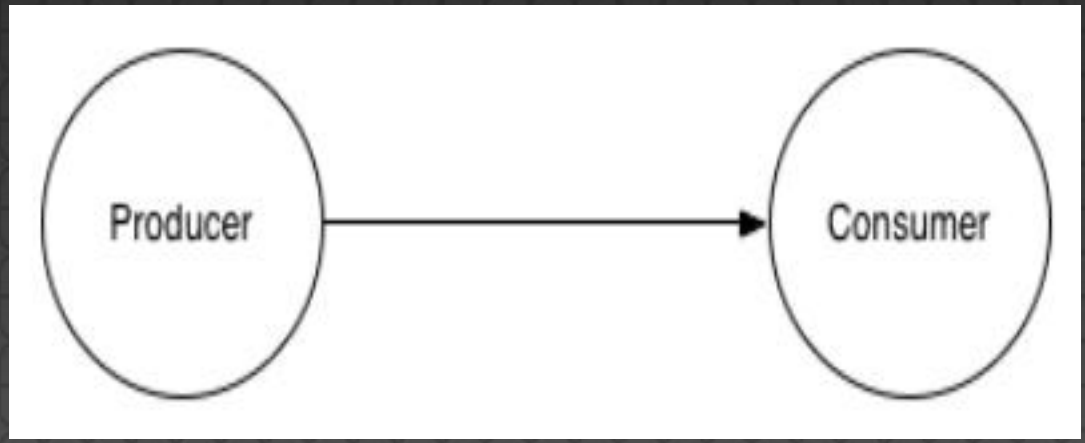
Request/Reply



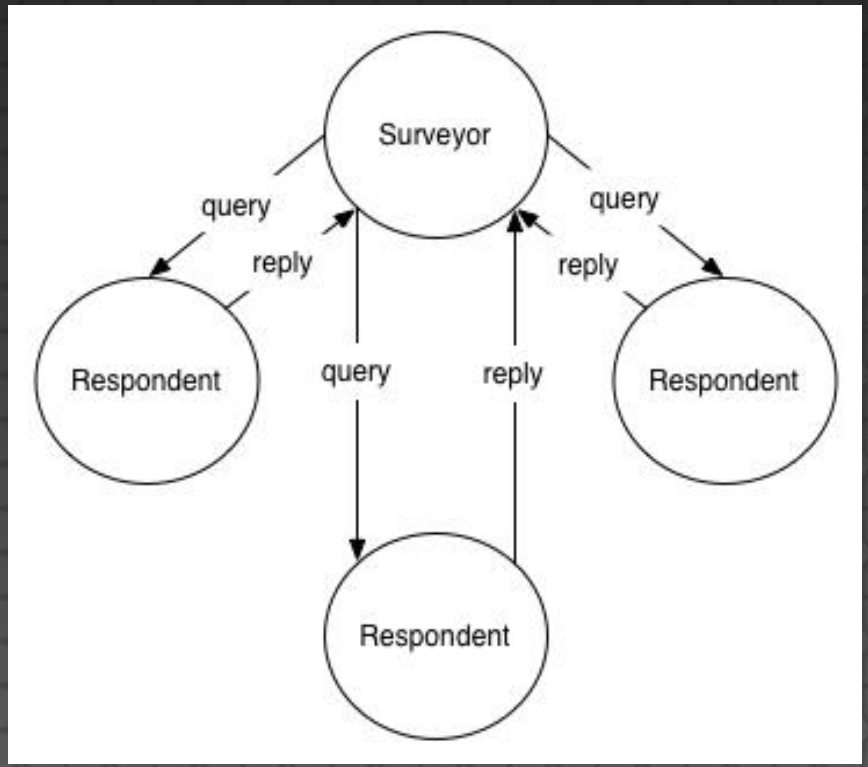
PUB/SUB



PIPELINE



SURVEY


Surveyor
query
reply
query
reply
Respondent
query
reply
Respondent
Respondent

Why keep using ZeroMQ ?

1.nanomsg还相对年轻，最近一个月刚出了1.0.0正式版
2.nanomsg没有像ZeroMQ那样有一个繁荣的开发者社区
3.ZeroMQ有丰富的文档及其它资源，可以帮助开发人员使用它，而nanomsg的文档非常少

尽管如此，我还是认为nanomsg所做的改进，尤其是它的可扩展协议，使它非常有吸引力。