

B

Gate

27-6-2019

# CONTAINERS TODAY

The Hague

Powered by

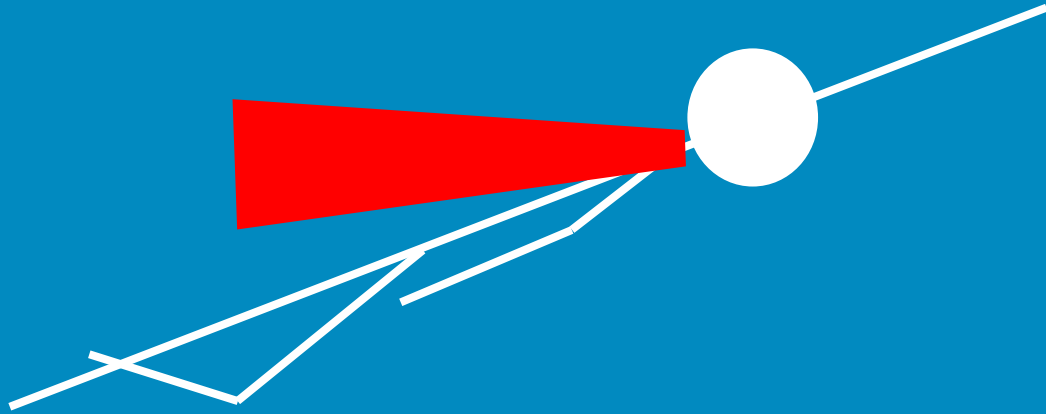
**Amazic**  
Market Development

# Blockchain

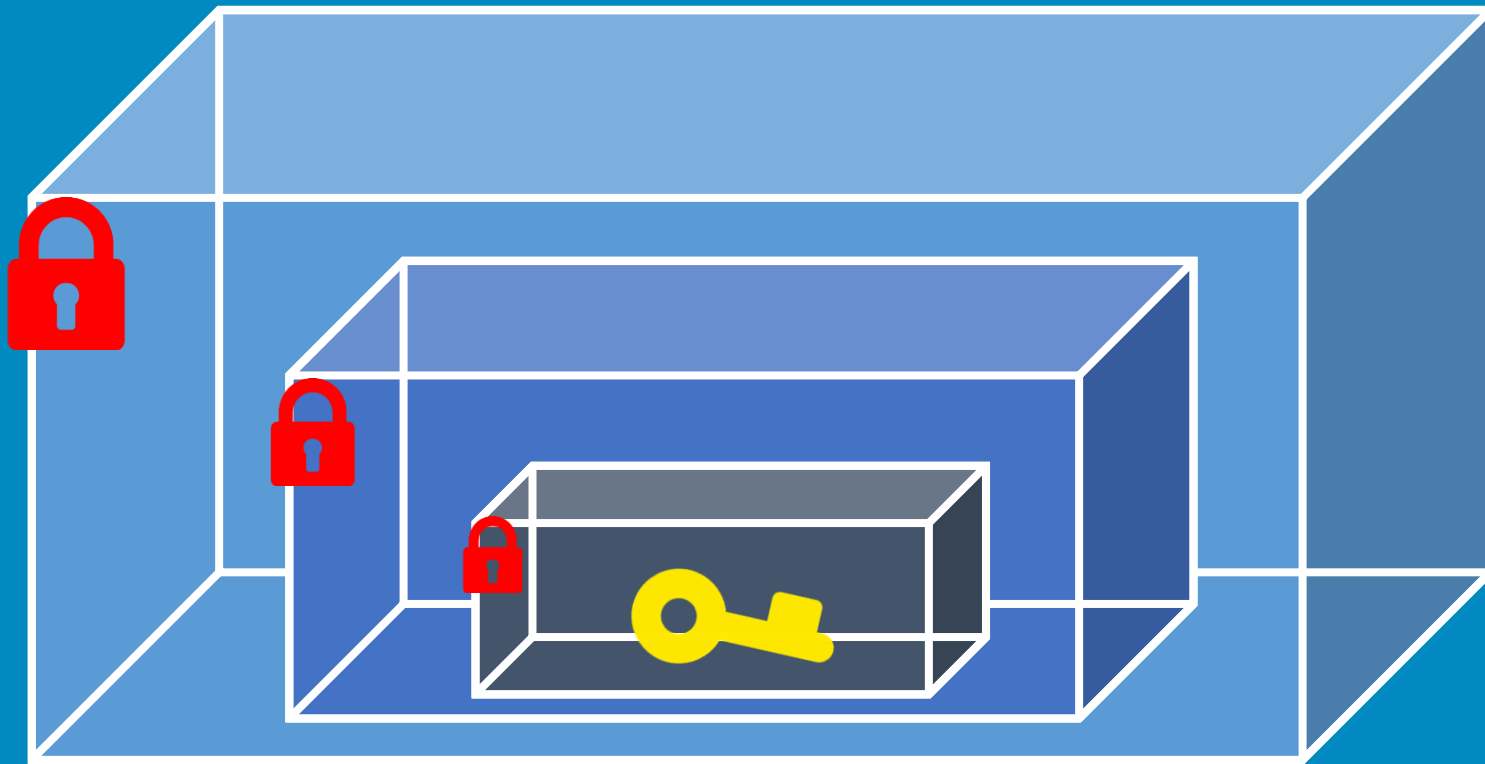
Let's start simple



# Admins have superpowers



# More access control is not the answer



# We need tamper resistance

Locks can be opened and closed  
by people with *right* authority

Security tape show that the package  
is opened *regardless* of authority

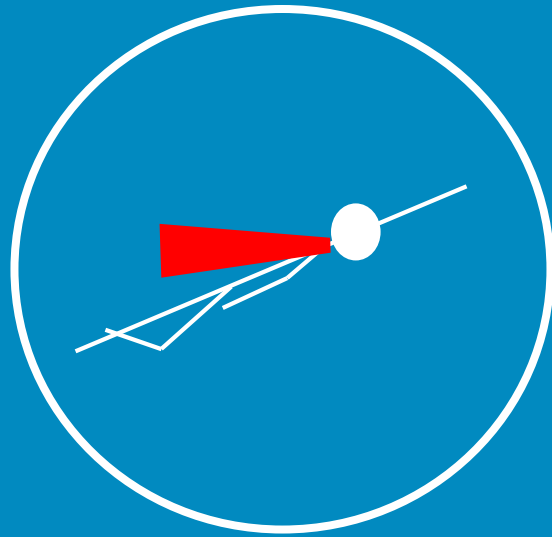


# Audit trail is a good first step

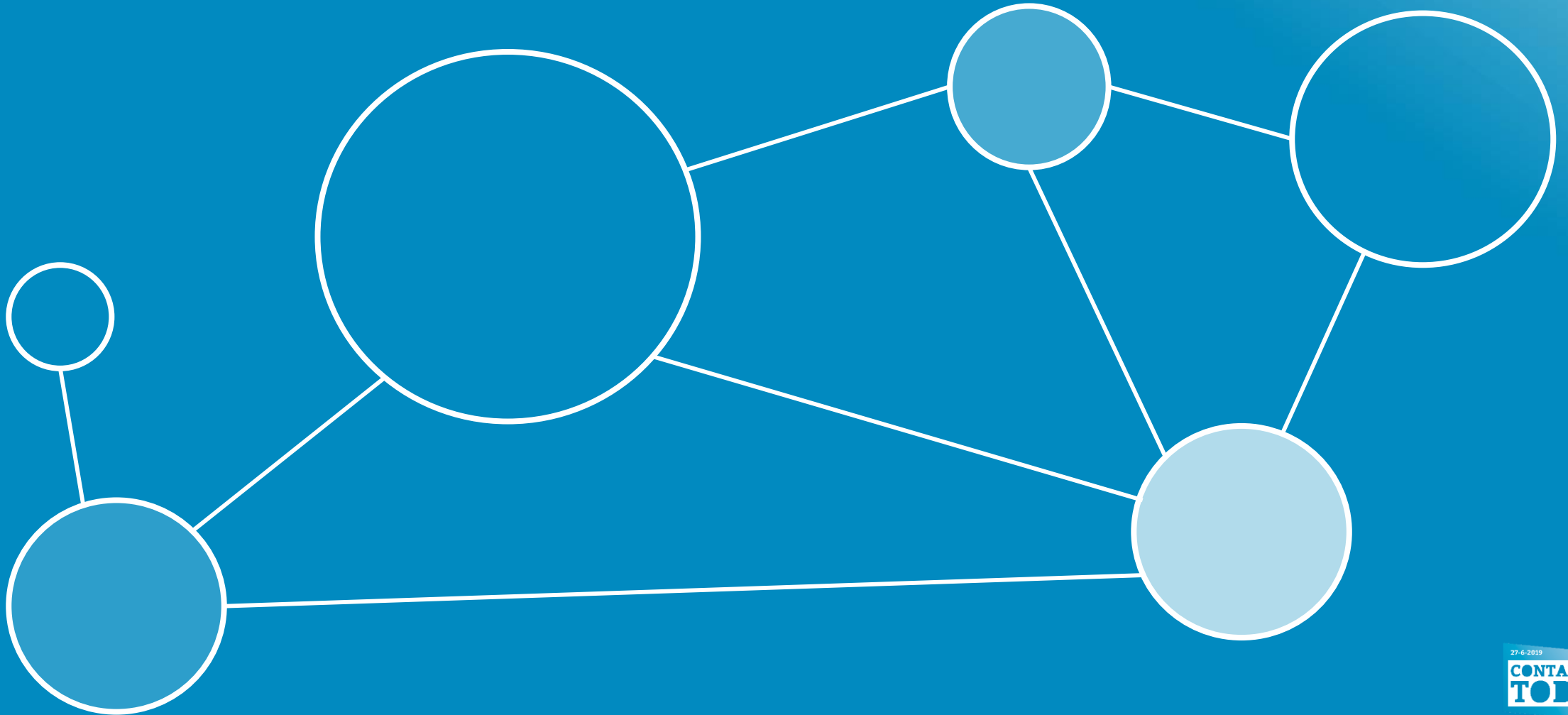
```
Jun 18 23:00:53 some-system systemd: pam_unix(systemd-user:session): session closed for user root
Jun 18 23:00:54 some-system su[12328]: Successful su for root by root
Jun 18 23:00:54 some-system su[12328]: + ??? root:root
Jun 18 23:00:54 some-system su[12328]: pam_unix(su:session): session opened for user root by (uid=0)
Jun 18 23:00:54 some-system systemd: pam_unix(systemd-user:session): session opened for user root by (uid=0)
Jun 18 23:00:54 some-system systemd-logind[1161]: New session c51 of user root.
Jun 18 23:00:54 some-system su[12328]: pam_unix(su:session): session closed for user root
Jun 18 23:00:55 some-system systemd-logind[1161]: Removed session c51.
Jun 18 23:00:55 some-system systemd: pam_unix(systemd-user:session): session closed for user root
Jun 18 23:03:16 some-system gdm-password]: gkr-pam: unlocked login keyring
```

```
$ _
```

# Verification of authenticity

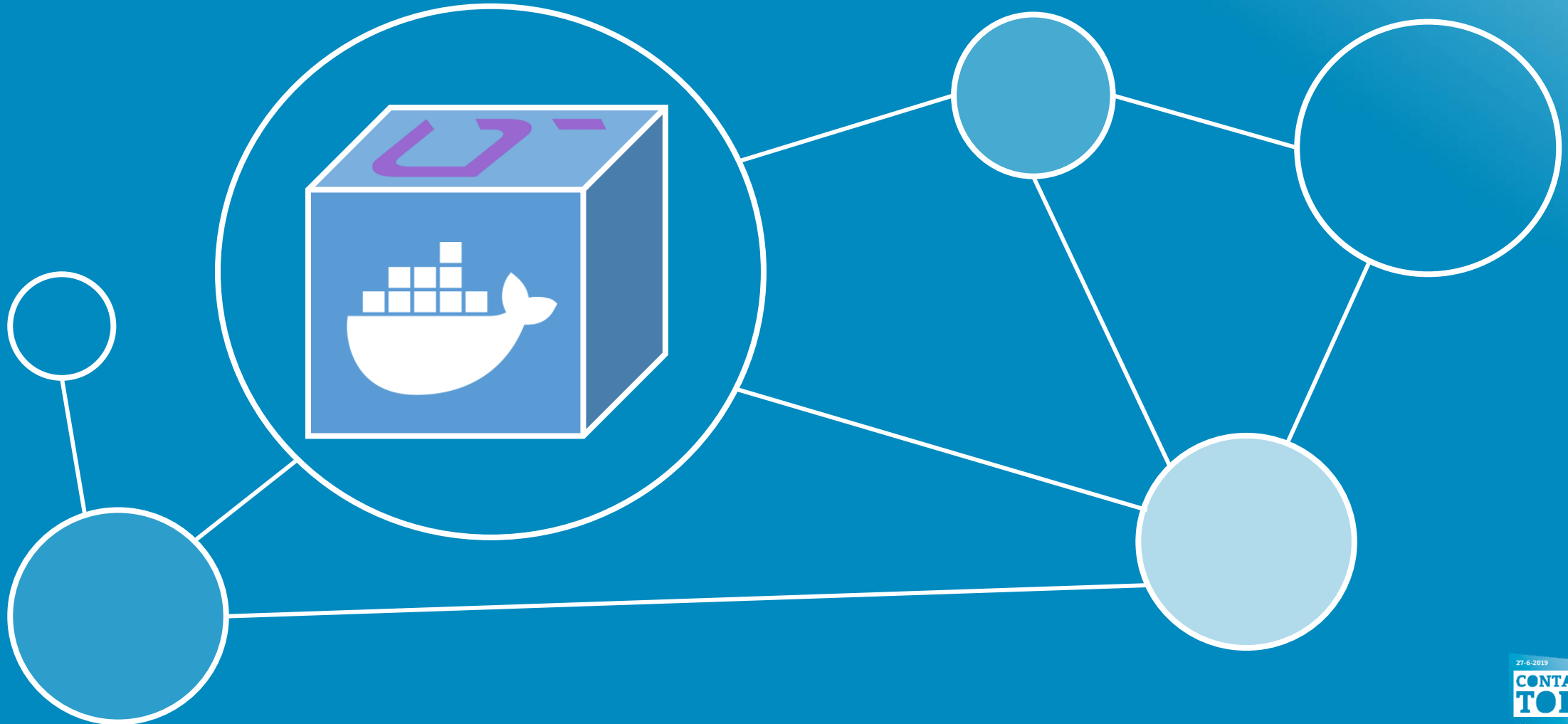


# Blockchain takes it to the next level

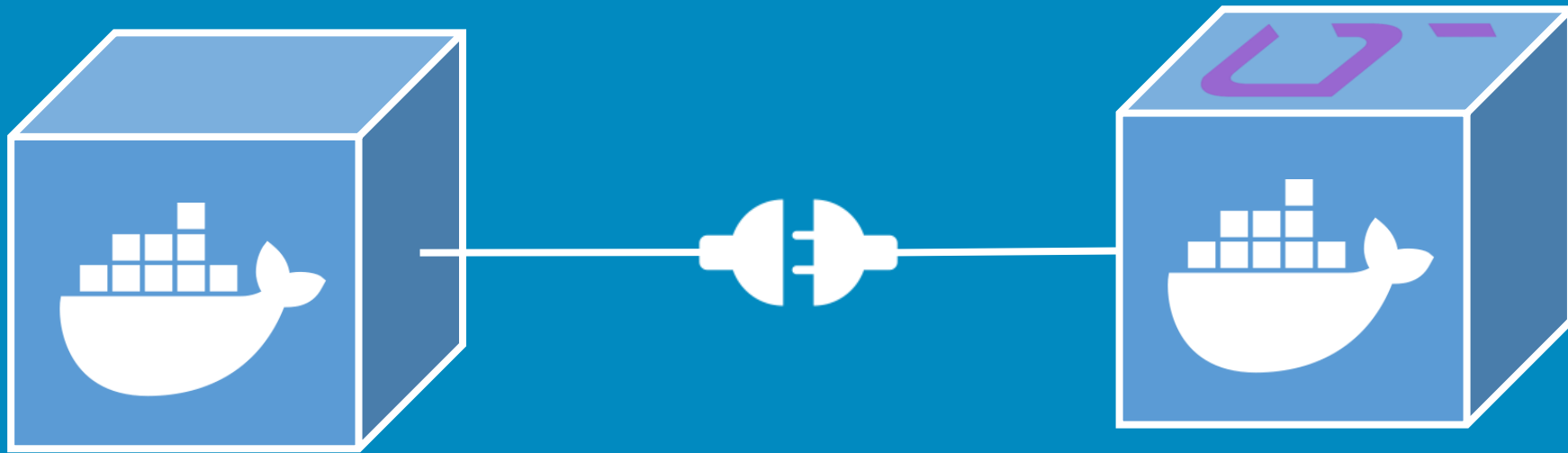




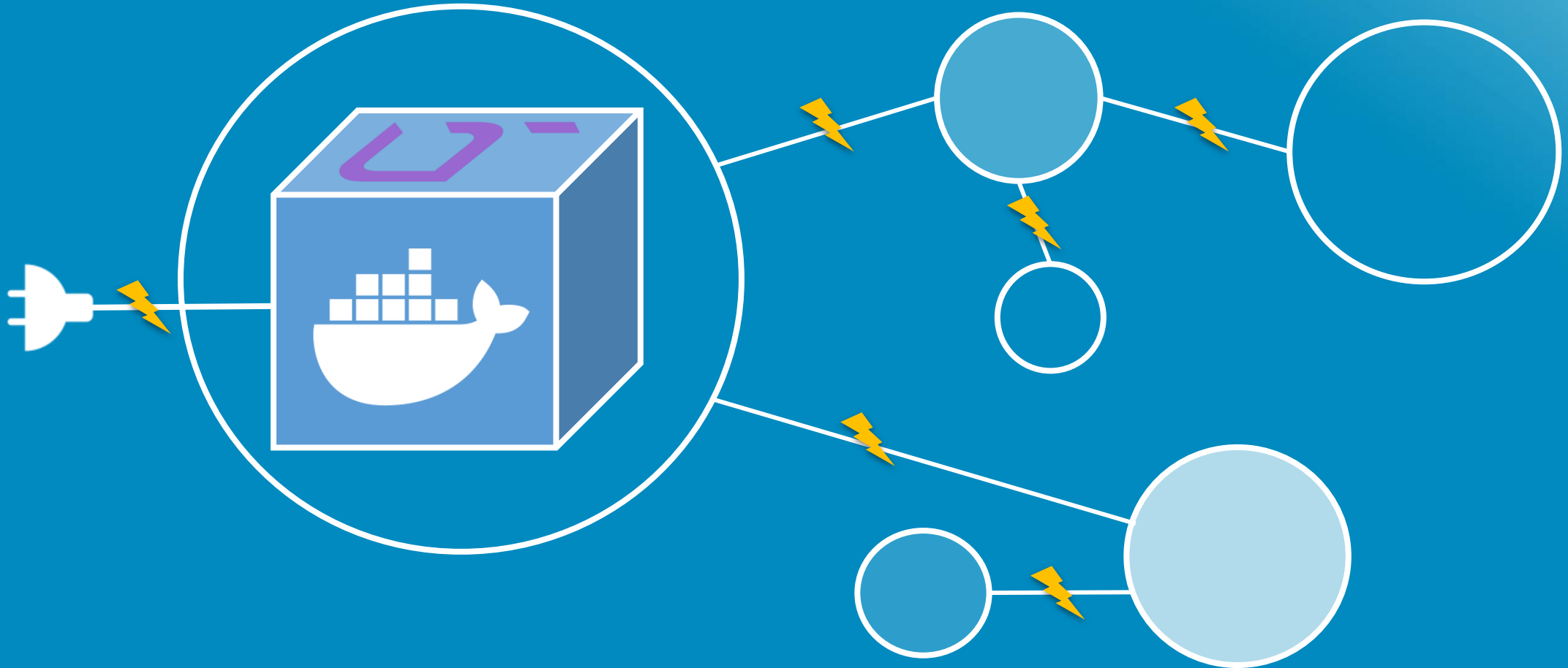
# Blockchain is just a container away



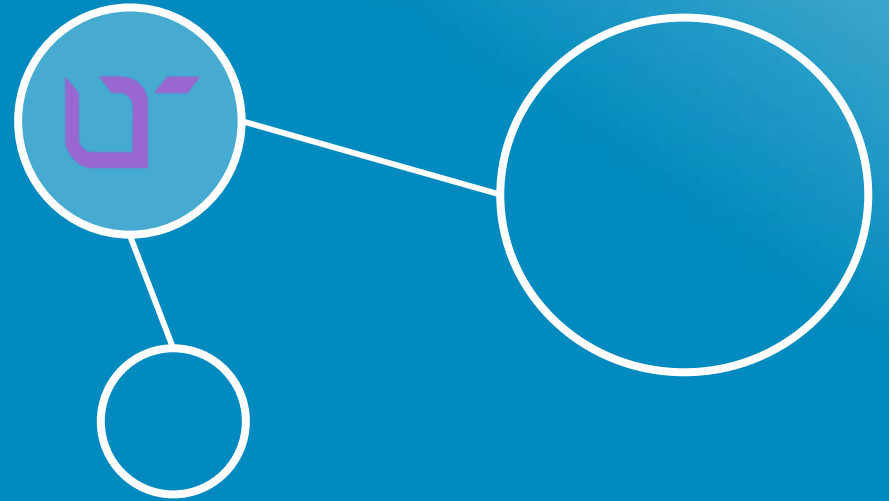
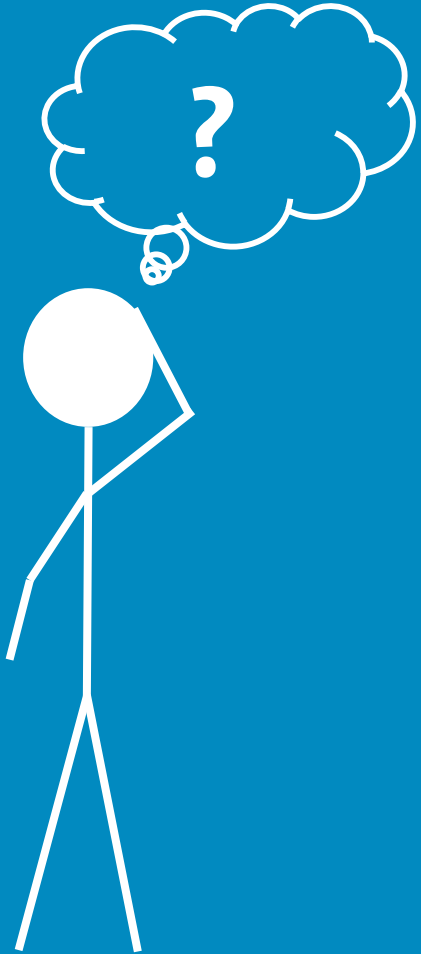
# Blockchain nodes expose a REST API



# Hashes are broadcast to all nodes



# Verify on any node but your own



# A practical example

**LTO log**; customized Docker logging driver

1. create hash chain
2. anchor every X entries
3. ...
4. profit



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# LTO Network

<https://lto.network>

