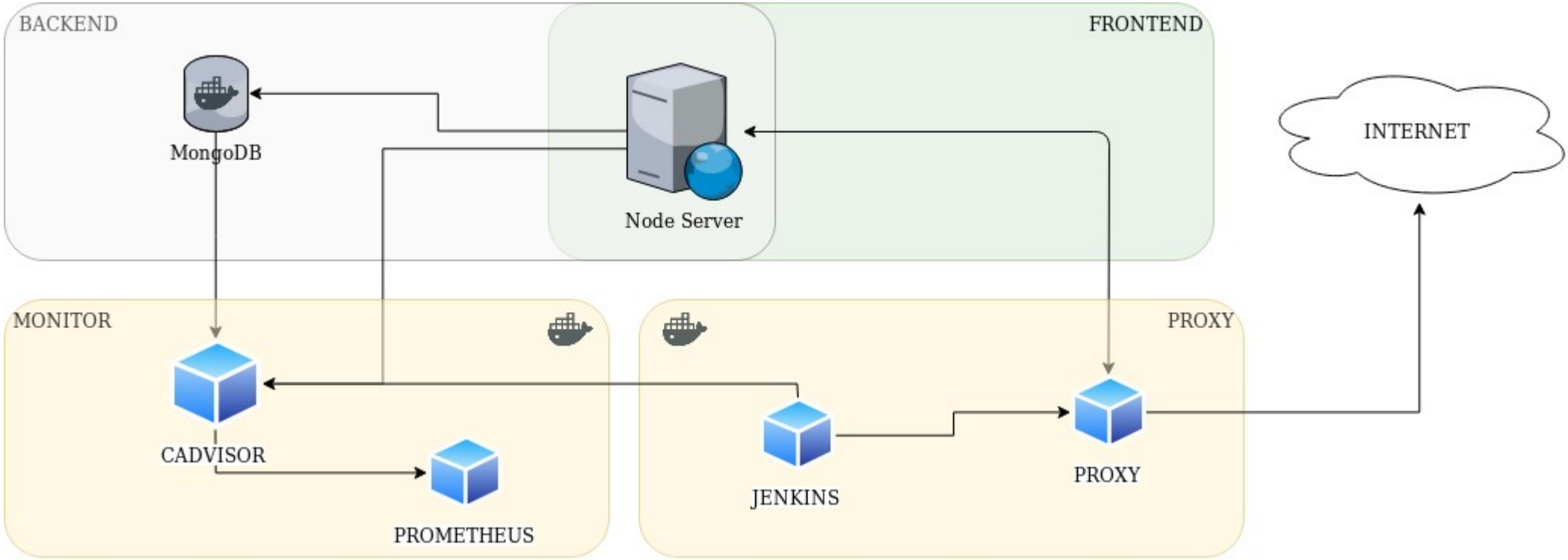
Architecture TO-BE

New cloud architecture proposition for customer Answer42

Alessandro Affinito

Swarm stacks by network



Simplified design of dockerized, scalable and centrally monitored architecture

Swarm stacks by network

- **Monitor**
  - Cadvisor:
    Analyzes resource usage and performance characteristics of running containers. Tells swarm-listener that it should notify monitor when this service is created, updated, or removed. Another label specifies that Prometheus should scrape data from this service running on port 8080.
    https://github.com/google/cadvisor

  - Alert-manager: using Docker Flow Monitor instead of directly Prometheus, the configuration options and startups can be specified as environment variables thus removing the need for configuration files and their persistence.

  - Swarm Listener: The swarm-listener service will listen to Swarm events and notify the monitor whenever a service is created, updated, or removed.

Swarm stacks by network

- **Proxy**
  - Proxy: convenient way to get a single access point to the cluster instead opening a different port for each publicly accessible service.
    The proxy will be notified whenever a service is deployed or updated as long as it has the *com.df.notify* label set to true.
  - Jenkins: engine and children node manager
  - Jenkins Agent: executes Jenkins jobs trough ad-hoc *sibling* [1] docker images

- **Backend / Phoenix**
  - Node app: this is the container of the web server exposed to internet.
    This is also linked to a MongoDB image.
  - Mongo DB: official MongoDB image, it is also configured as a replicable and load-balanced node by Swarm

1) Docker High Performance - Second Edition - by Russ McKendrick, Allan Espinosa - Packt Publishing

Thanks