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# Circuit breaker

PHP - Forum 2016

[www.eleven-labs.com](http://www.eleven-labs.com)

# Qui suis-je ?

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@CaptainJojo42



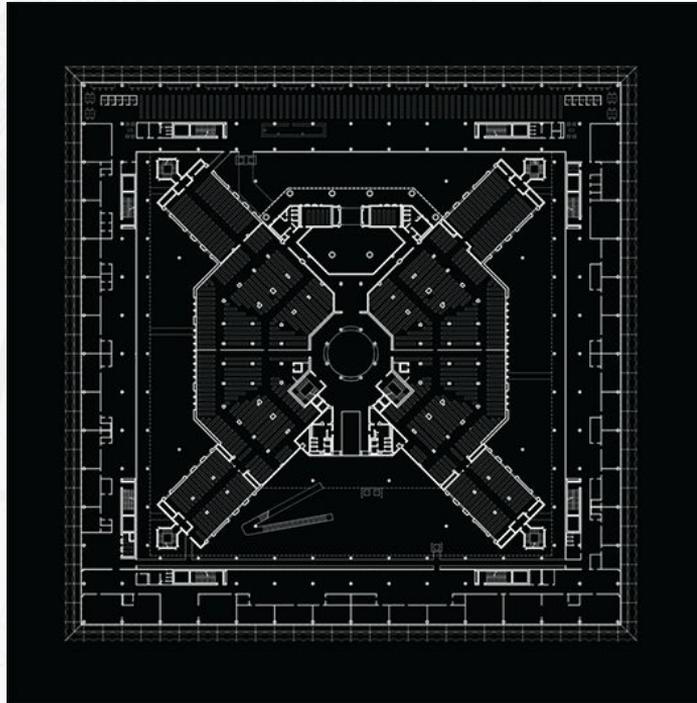
<https://github.com/captainjojo/>

PHP - Symfony - React - Backbone - Node - Pg - RabbitMQ  
-MongoDB - etc ...



# Architecture

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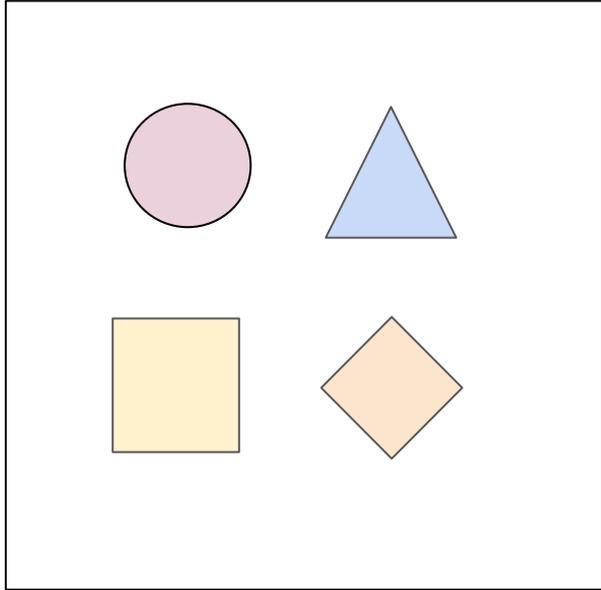


# Monolitique vs Microservices

Dessins d'Olivier Grange Labat CTO Lemonde

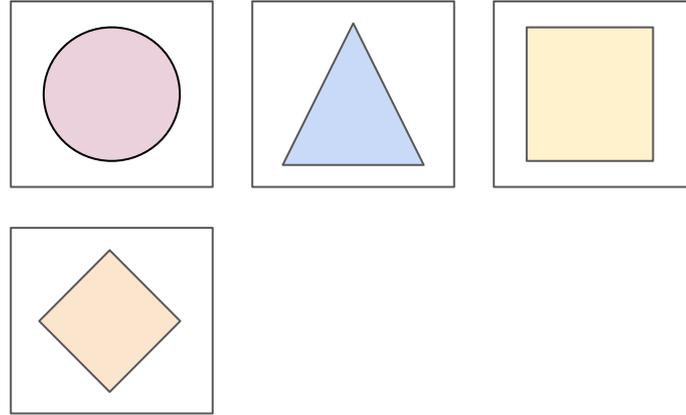
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# Monolithique



Les composants (pages articles, classeur abonné, suivi d'actu, etc.) sont tous sur un même serveur.

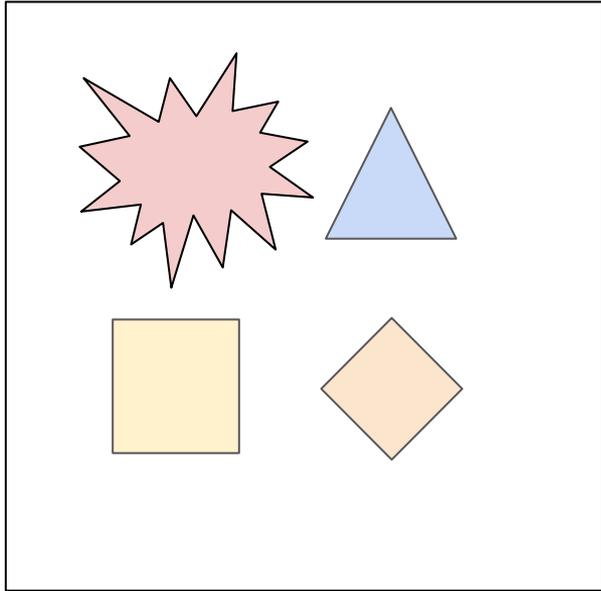
# Microservices



Les composants sont sur des serveurs dédiés, indépendants les uns des autres.

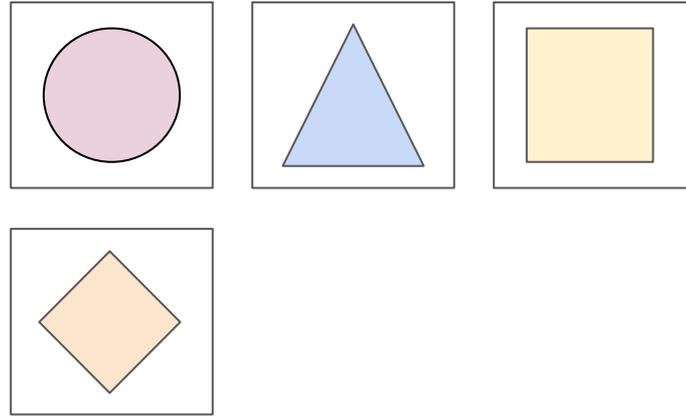
 = un serveur

# Monolithique

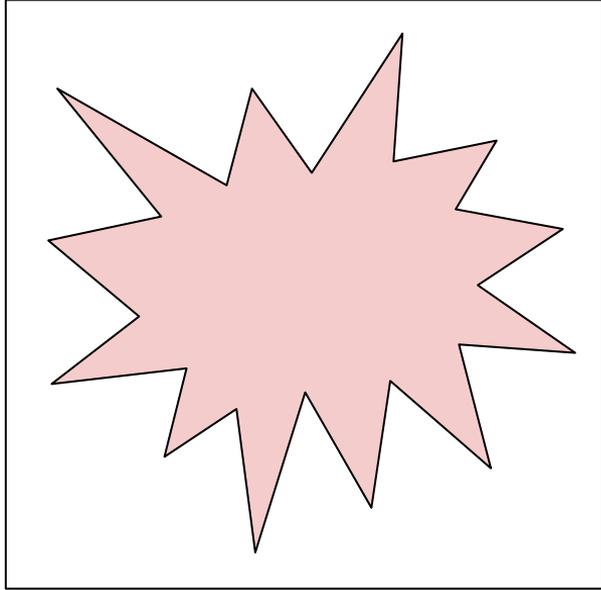


La panne d'un composant...

# Microservices

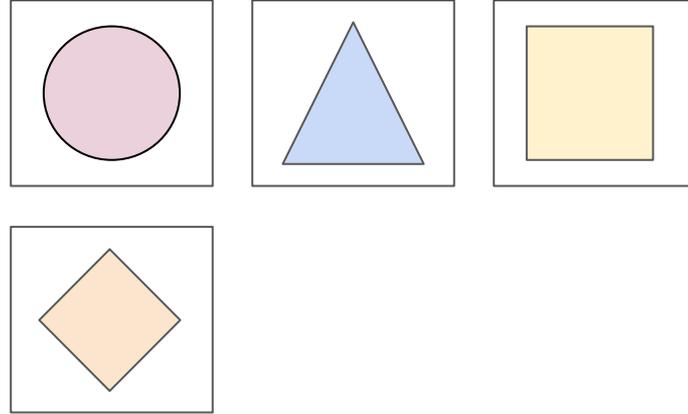


# Monolithique

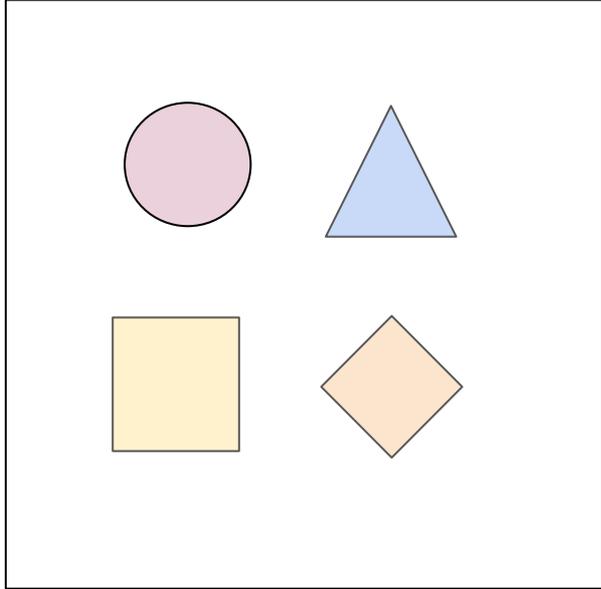


... entraîne la panne de tout le serveur :(

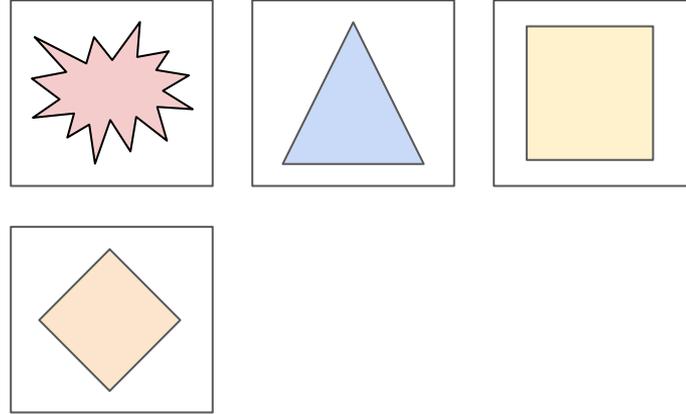
# Microservices



# Monolithique

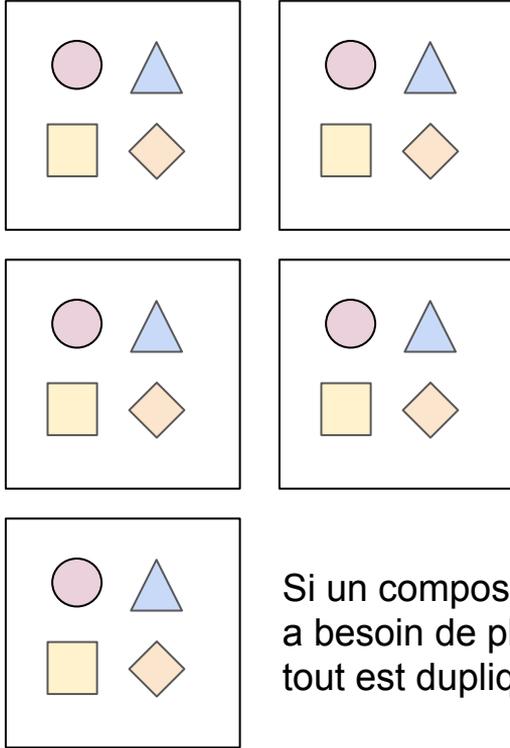


# Microservices

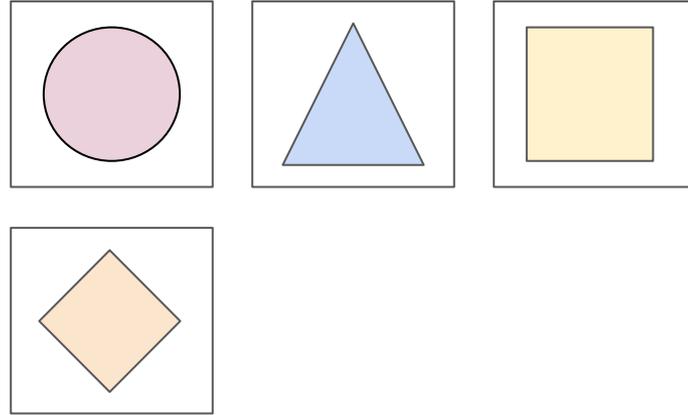


La panne d'un composant (exemple : classeur abonné)  
reste localisée : les autres continuent de fonctionner :)

# Monolithique

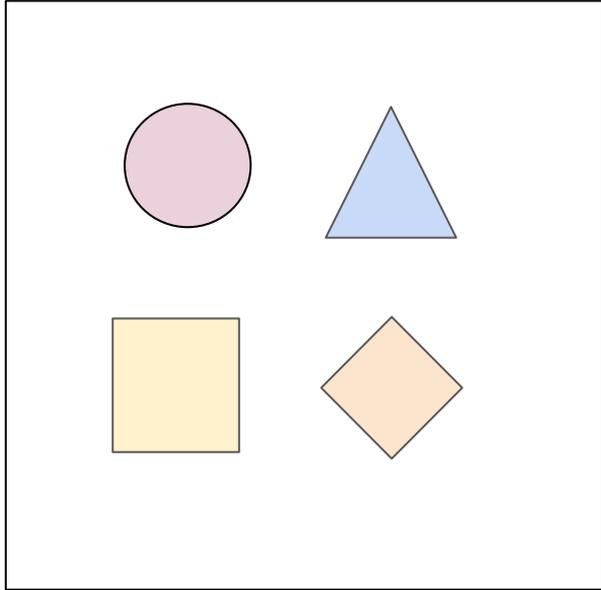


# Microservices

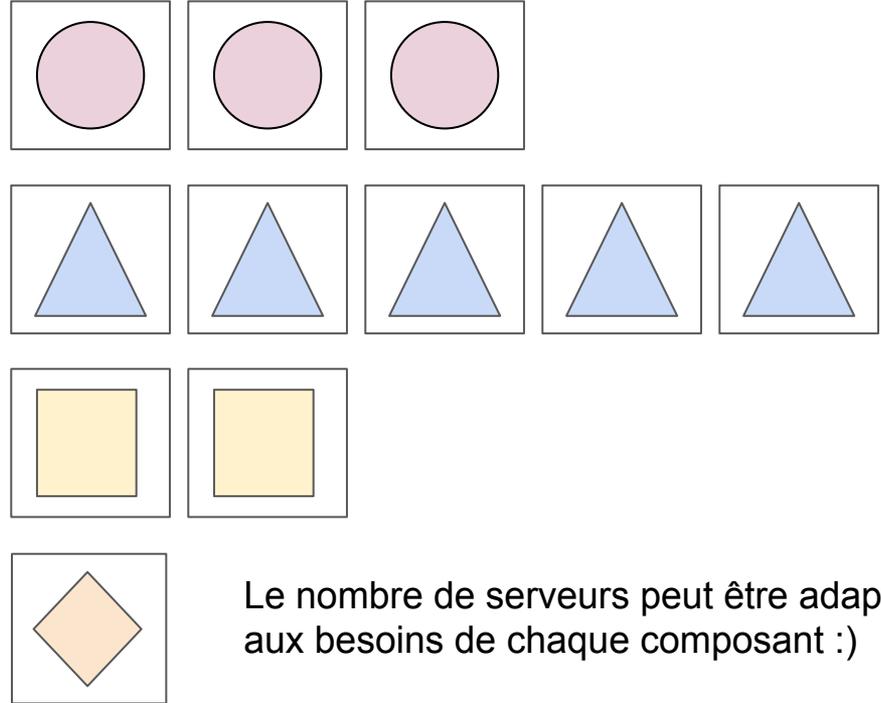


Si un composant en particulier  
a besoin de plus de serveurs,  
tout est dupliqué :(

# Monolithique



# Microservices



Le nombre de serveurs peut être adapté aux besoins de chaque composant :)

# Oui mais c'est quoi un circuit breaker ?

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# Un peu d'histoire

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- Il n'y a pas si longtemps, l'électricité arrive en France
- Et c'est le drame ....

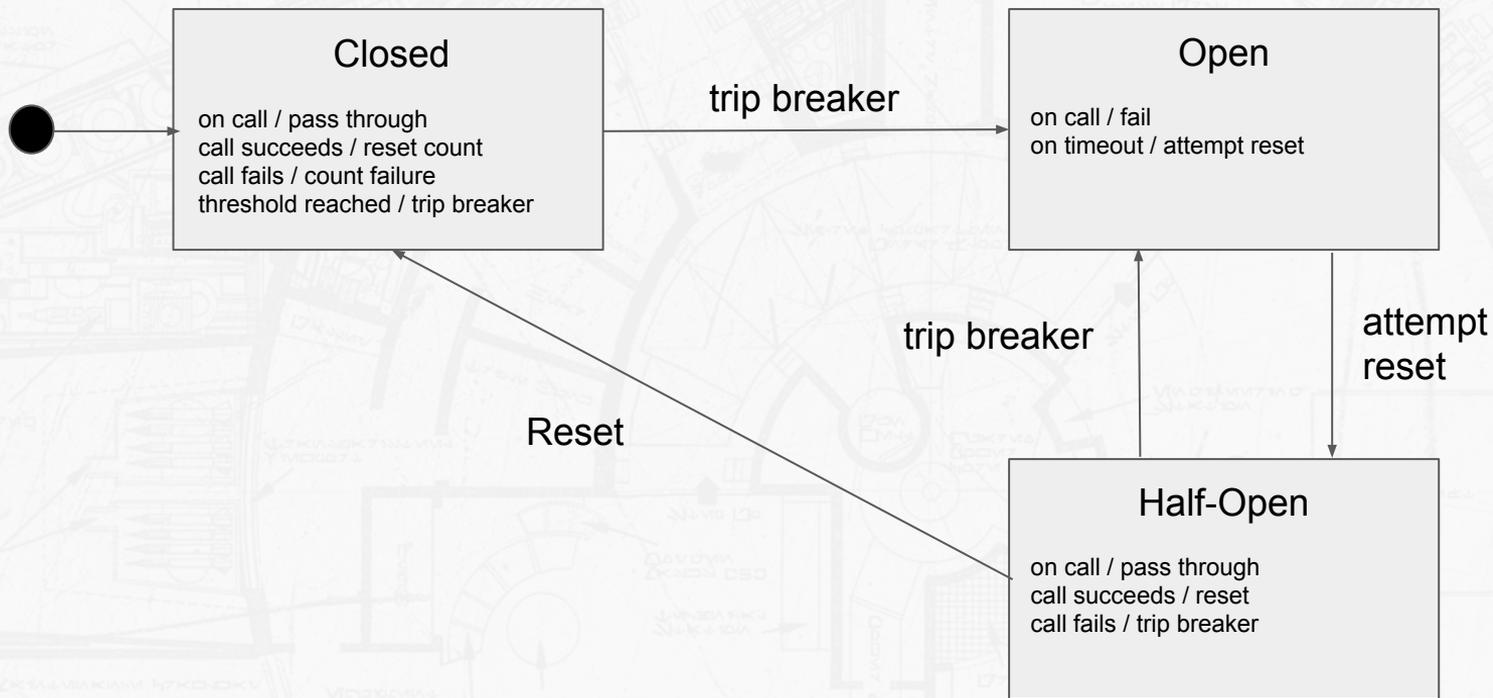


# Le disjoncteur

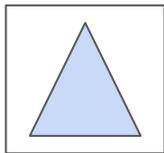
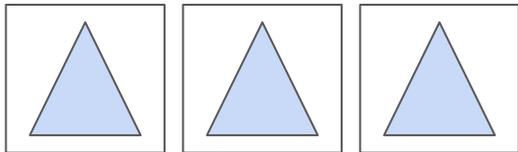
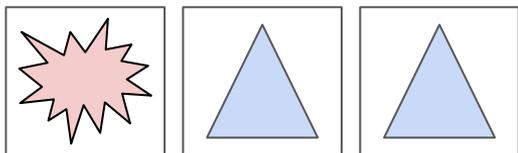
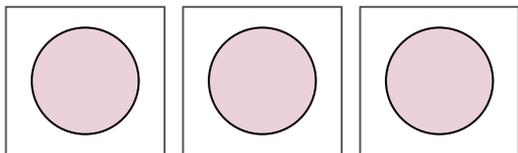
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# Circuit breaker

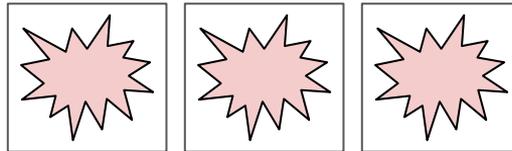
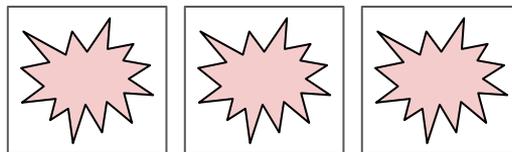
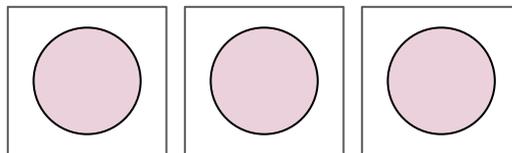


Sans circuit breaker



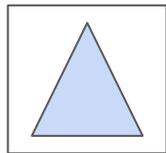
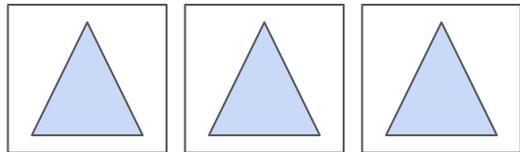
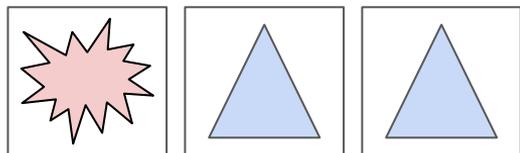
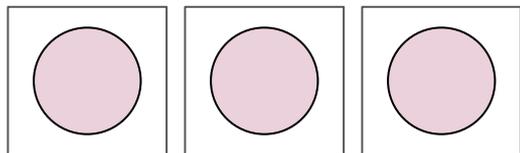
Un service casse

Sans circuit breaker



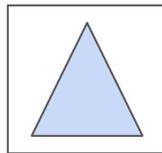
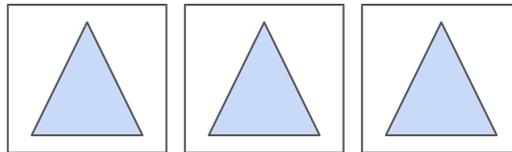
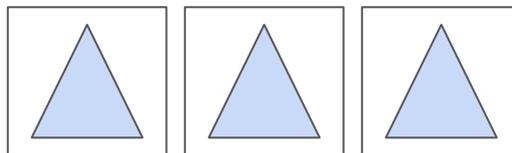
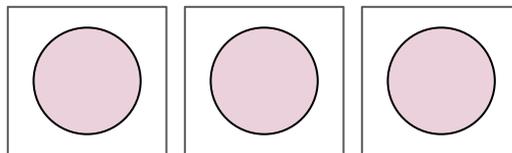
Il amène les autres avec lui

Avec circuit breaker



Un service casse

Avec circuit breaker



On attend qu'il se soigne

# Implémentation

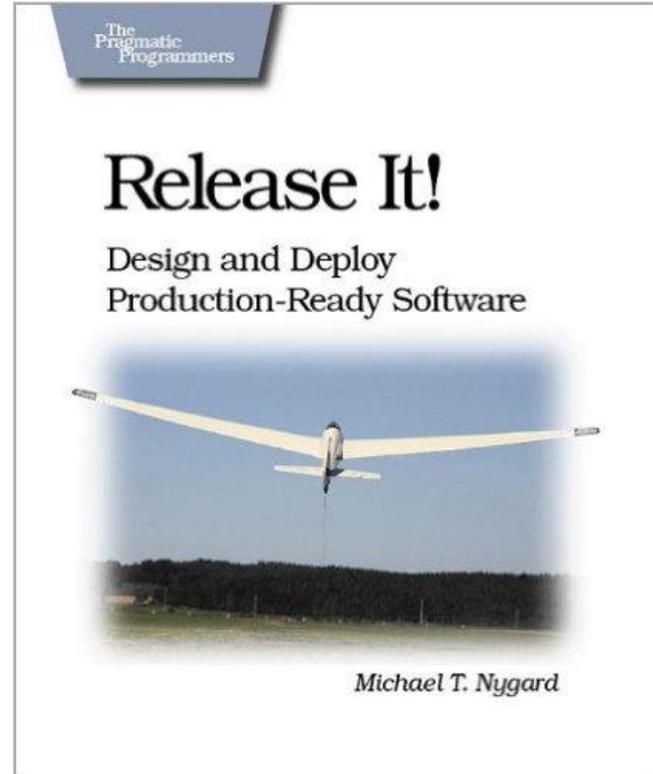
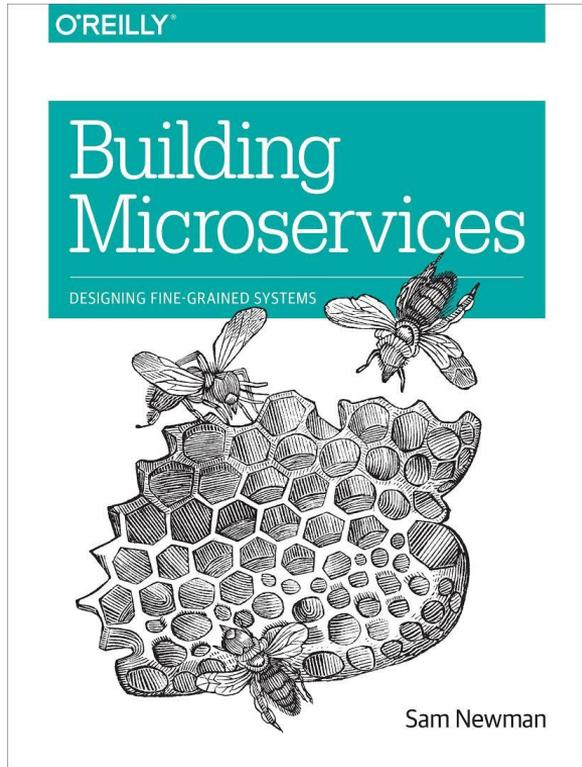
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- <https://github.com/ejsmont-artur/php-circuit-breaker-bundle>
- Les middlewares Guzzle 6
- Utiliser les évènements symfony

# Ce qu'il faut retenir

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- **Don't do it if it hurts**
  - Circuit breaker c'est le pattern qui vous permet de protéger votre système
- **Use together with Timeouts**
  - Circuit breaker permet de ne pas appeler vos services qui ont des problèmes
  - Le pattern 'Timeouts' permet de savoir s'il y a un problème sur vos services
- **Expose, track, and report state changes**
  - Circuit breaker permet de suivre les problèmes de vos services



Vos livres de chevet :)

# Questions ?

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