



Liberte sua
arquitetura
com Cloud Native

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@andrepaulovich

me add aí

The image features a dark purple background with decorative geometric shapes in the corners. In the top-left and bottom-right corners, there are overlapping triangles in shades of teal and red. A small white logo, resembling a stylized 'S' or a similar symbol, is located in the top-left corner.

bit.ly/**slide-paulovich**



Plug and Play Cloud Services...



upgrades

Produtividade

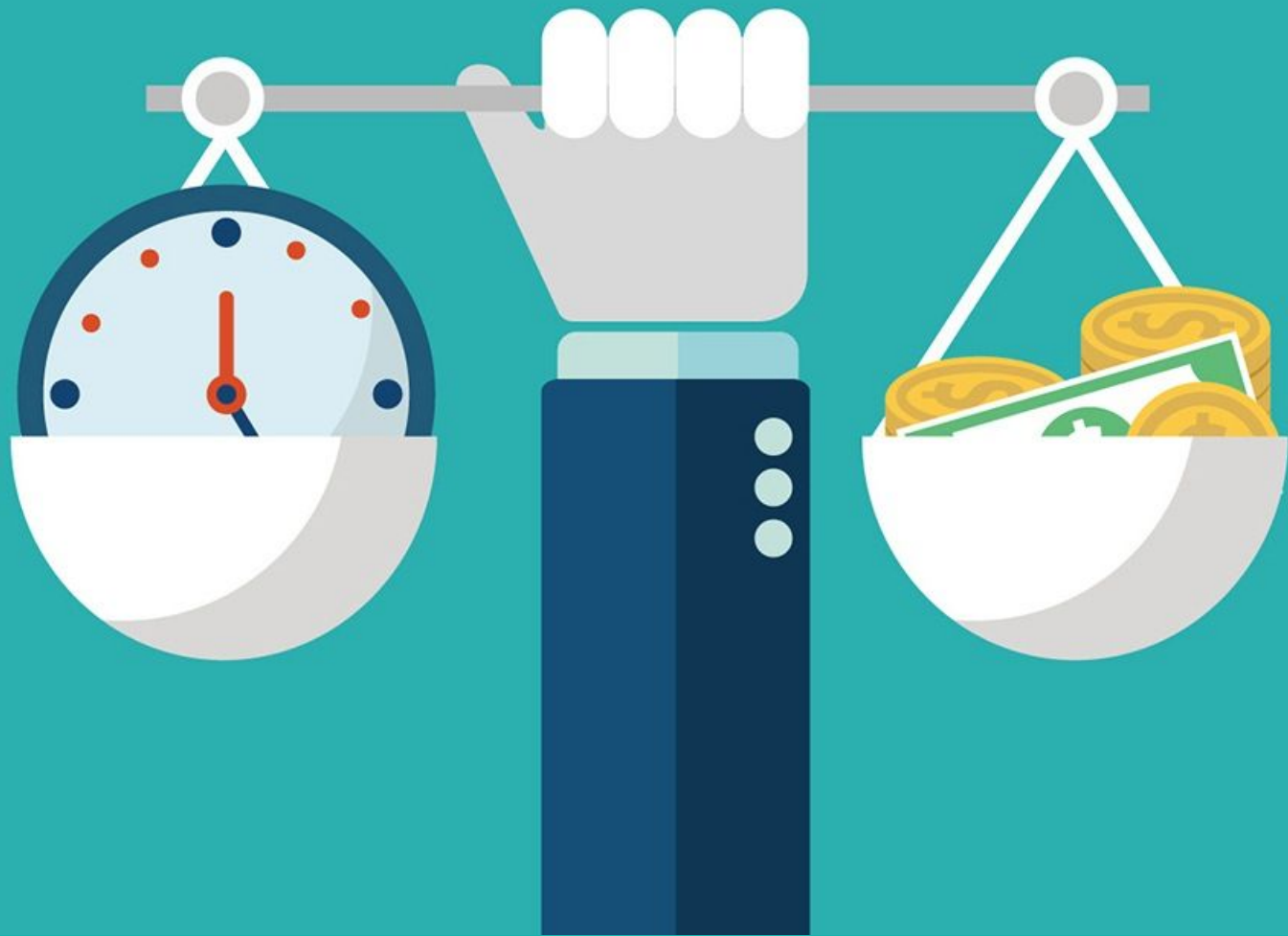
Auto
Recovery

DevOpsLESS

Plug and Play

Auto
Gerenciados







Agora me dei bem!



Calma aí...





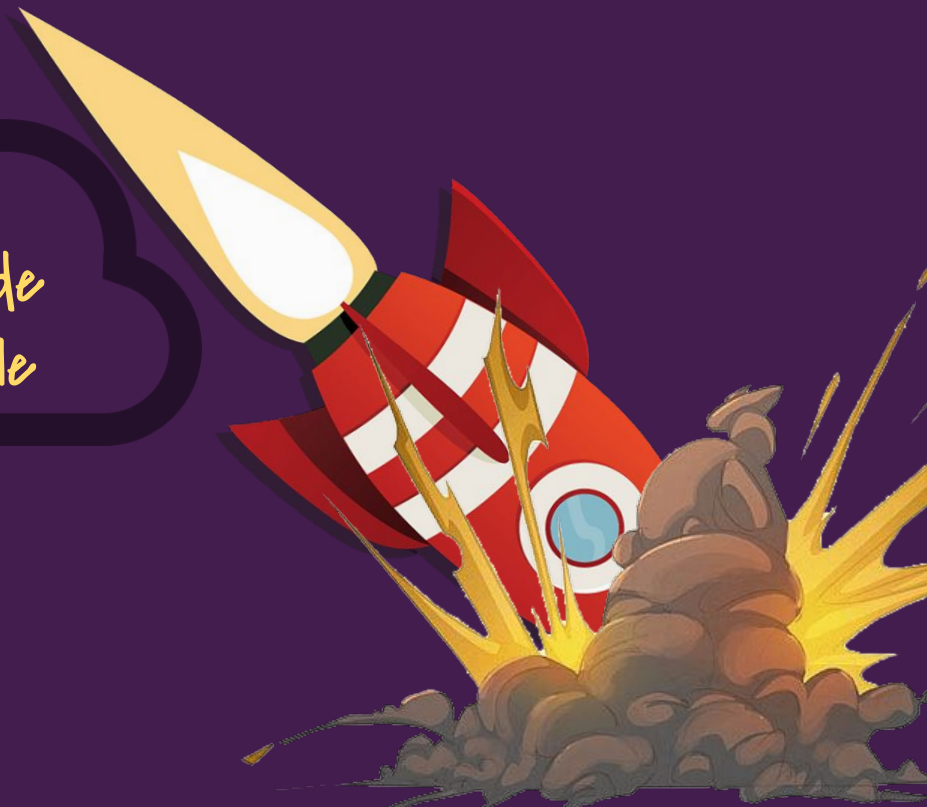
Fácil demais



Vendor Lock-in

Custos "Altos"

Falta de
controle



8

Não caia na armadilha
"vendor lock-in"

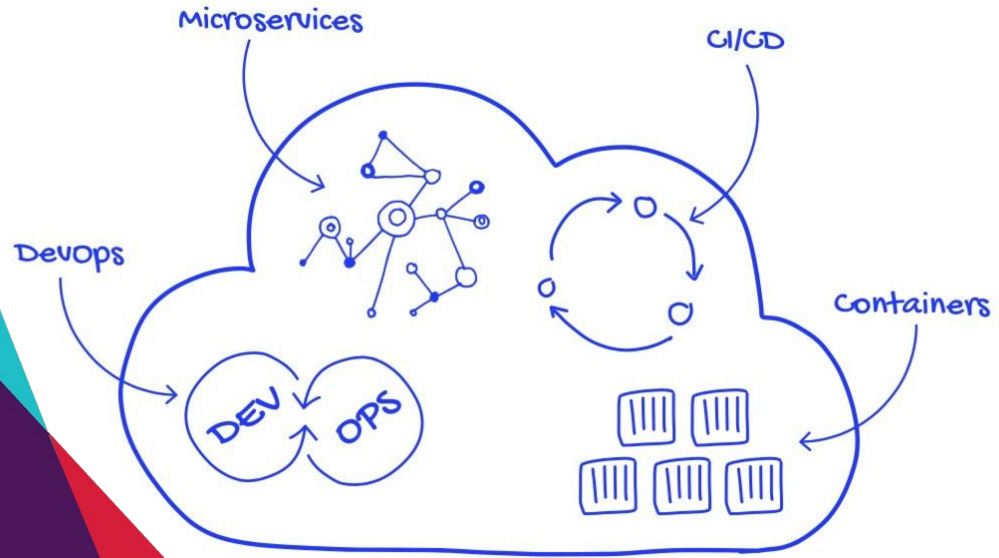


Tem como fazer diferente e
ainda assim ter estes
"aceleradores maneiros"?

Mas se eu não for para uma nuvem "plug an play", eu terei que criar estes "aceleradores" por minha conta?

Cloud Native

é a maneira
"open source" de criar
os aceleradores e recuperar
o modo "roots" de desenvolver
soluções de nuvem.





Cloud Computing

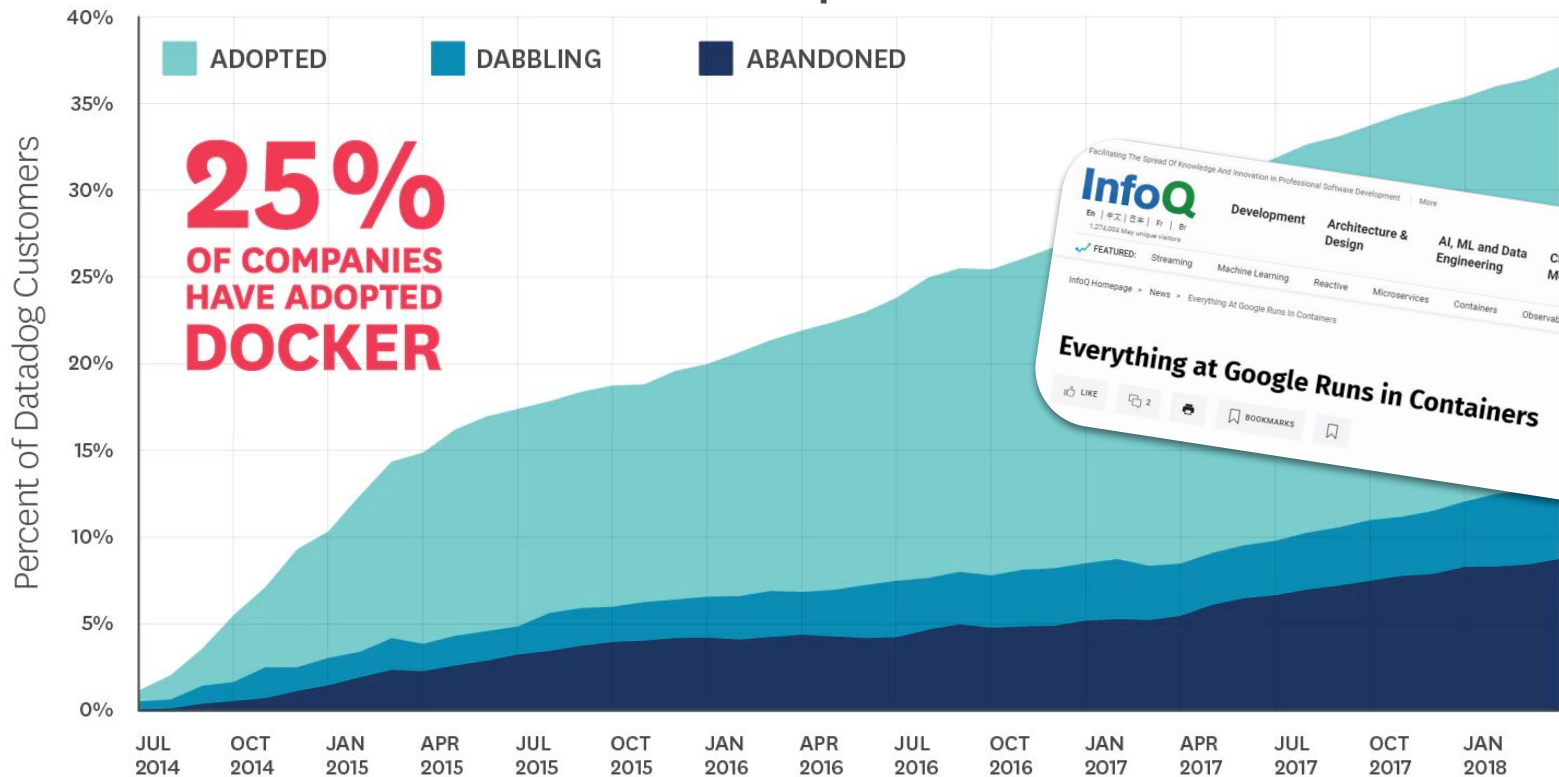


Containerização



Cultura de DevOps

Docker Adoption Behavior



Month (segmentation based on end-of-month snapshot)

Source: Datadog

Você já ouviu sobre tudo isso,
certo? SIM!

Cloud Native é vanguarda!

Platinum Members

Alibaba Cloud



Microsoft Azure



DELL Technologies

FUJITSU

ORACLE

Pivotal

Red Hat

Google Cloud



IBM Cloud

SAMSUNG
SAMSUNG SDS



vmware



Adotar "Cloud Native" é difícil, mas não adotar é ainda pior.

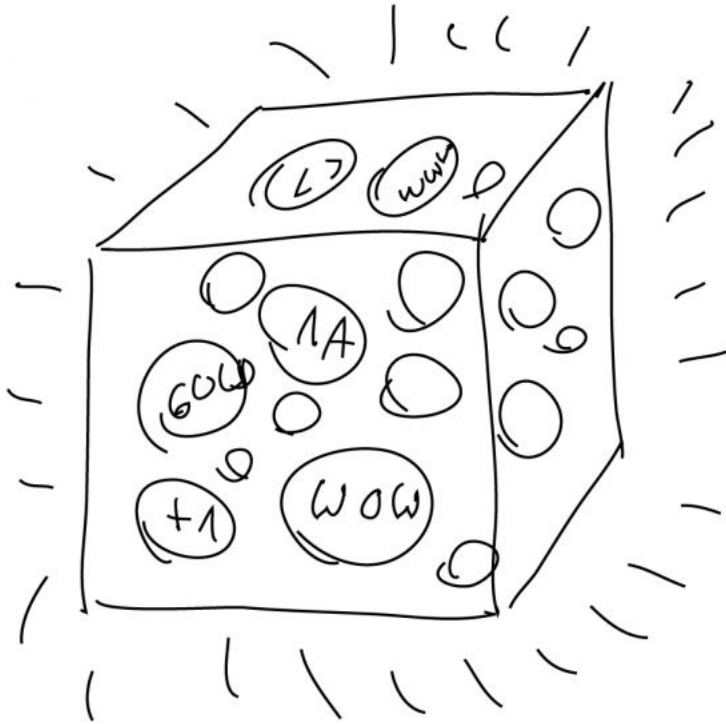


É preciso se reinventar!

BDUF

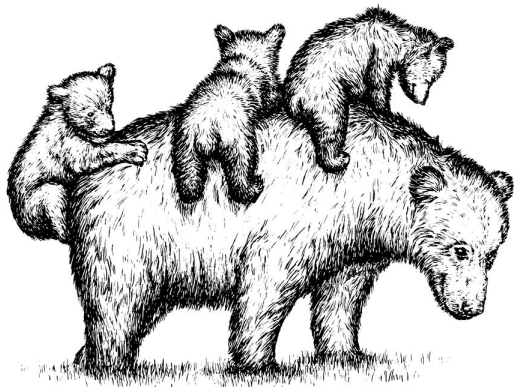
vs

MVP





Getting the wrong idea from that conference talk you attended



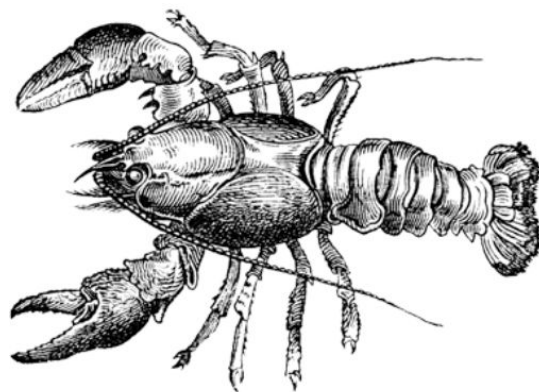
Solving Imaginary Scaling Issues

At Scale

○ RLY?

@ThePracticalDev

Dont even leave Slack to do it



Making Your Own Parody Covers

The Definitive Guide

○ RLY?

Kanye West

Geeks México



Write useless logs

The Definitive Guide

○ RLY?

raidentrance



Somente o necessário...



Minimum viable ~~Product~~
Platform



1. CONTAINERIZATION

- Normally done with Docker containers
- Any size application and dependencies (even PDP-11 code running on an emulator) can be containerized
- Over time, you should aspire towards splitting suitable applications and writing future functionality as microservices



2. CI/CD

- Setup Continuous Integration/Continuous Delivery (CI/CD) so that changes to your source code automatically result in a new container being built, tested, and deployed to staging and eventually, perhaps, to production
- Setup automated rollouts, roll backs and testing

3. ORCHESTRATION

- Pick an orchestration solution
- Kubernetes is the market leader and you should select a Certified Kubernetes Platform or Distribution
- <https://www.cncf.io/ck>



5. SERVICE MESH

- Connects services together and provides ingress from the Internet
- Service discovery, health checking, routing, load balancing
- Consider Envoy, Linkerd and CoreDNS



7. DISTRIBUTED DATABASE

When you need more resiliency and scalability than you can get from a single database, Vitess is a good option for running MySQL at scale through sharding.



9. CONTAINER RUNTIME

You can use alternative container runtimes. The most common, all of which are OCI-compliant, are containerd, rkt and CRI-O.



4. OBSERVABILITY & ANALYSIS

- Pick solutions for monitoring, logging and tracing
- Consider CNCF projects Prometheus, Fluentd for logging and Jaeger for Tracing
- For tracing, look for an Open Tracing-compatible implementation like Jaeger



6. NETWORKING

To enable more flexible networking, use a CNI-compliant network project like Calico, Flannel, or Weave Net.



8. MESSAGING

When you need higher performance than JSON-RPC, consider using gRPC.



10. SOFTWARE DISTRIBUTION

If you need to do secure software distribution, evaluate Notary, an implementation of The Update Framework.



Cloud Native Trail



Seja evolutivo!



Operações

Qualidade

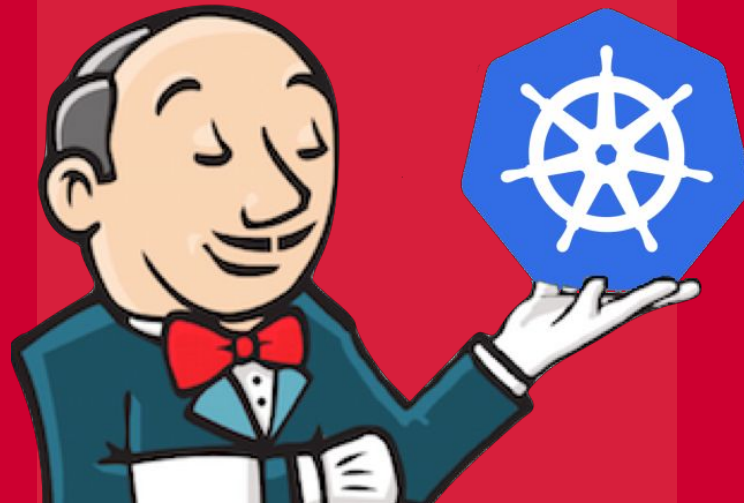
DevOps

Desenvolvimento

Padronização de ambientes
Provisionamento automatizado



Integração Contínua
Entrega de valor contínua



Recursos Self-Service
Prototipação Rápida



Por baixo vai código...

```
pt.input_filename)
int count;
status = retrieve_from_file (opt.input_filename, opt.force_html, &count);
if (count)
logprintf (LOG_NOTQUIET, _("No URLs found in %s.\n"),
opt.input_filename);
}
/* Print the downloaded sum. */
if (opt.recursive
|| nurl > 1
|| (opt.input_filename && opt.downloaded != 0))
{
logprintf (LOG_NOTQUIET,
_("\nFINISHED --%s--\nDownloaded: %s bytes in %d files\n"),
time_str (NULL), legible (opt.downloaded), opt.numurls);
/* Print quota warning, if exceeded. */
if (opt.quota && opt.downloaded > opt.quota)
logprintf (LOG_NOTQUIET,
("Download quota (%s bytes) EXCEEDED!\n"),
legible (opt.quota));
```



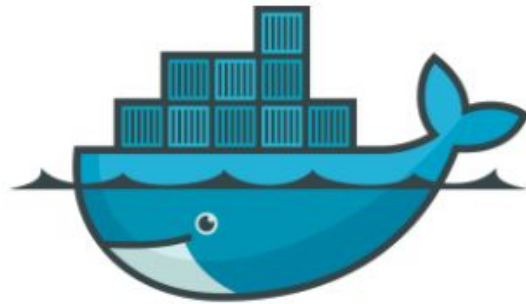
Google



kubernetes

“Essa plataforma elimina grande parte dos processos manuais necessários para **implantar** e **escalar** os aplicativos em containers. Em outras palavras, se você desejar agrupar em clusters os hosts executados nos containers Linux, o Kubernetes ajudará a **gerenciar** esses clusters com **facilidade e eficiência**.” RedHat

Melhor amigo do Docker!













PEGA A VISÃO:



Faça uma
comparação
entre várias soluções

Amazon EKS



Google GKE



Azure AKS



Tempo de Provisionamento	20 min	3 min	10 min
“Load balancing” Multi-região	Não	Sim	Não
Máximo de PODs por “Nó”	Limitado por ENI	100	110 (padrão 30)
Custo do painel de gestão	U\$0,20 /hr /nó 	Grátis 	Grátis 
Logs integrados no painel	Não	Sim	Sim
Criado em	2018 	2014	2017
Workers Gerenciados	Não 	Sim	Sim

*Comparação completa: <https://docs.google.com/spreadsheets/d/1U0x4-NQegEPGM7eVTKJemhkPy18LWuHW5vX8uZzqzYo/edit#gid=0>


Planeje um custo de migração de **entrada**
e também de **saída**

entrance



exit





**A subida é difícil,
mas a vista lá de cima
vale a pena!**

Referências

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Thank You!