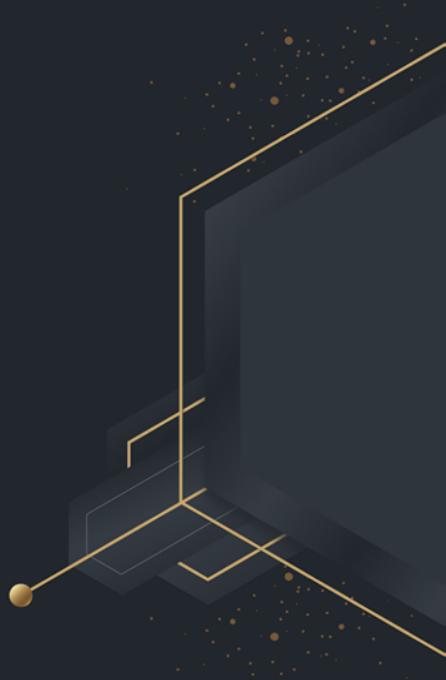




# Azure DevOps e Docker Registry

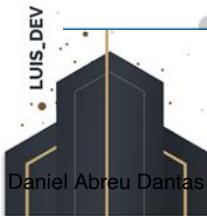
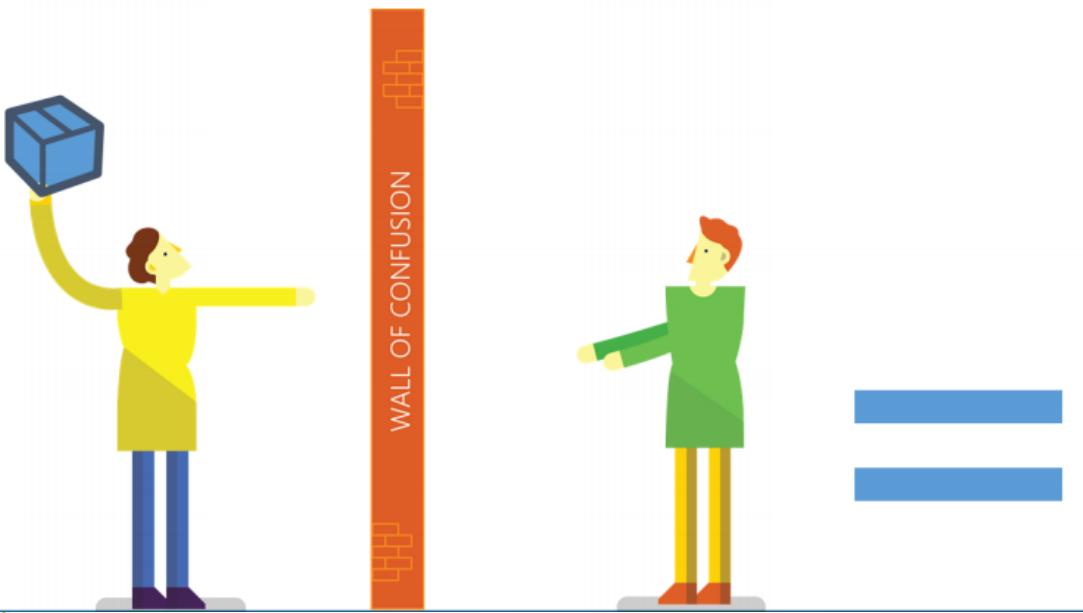




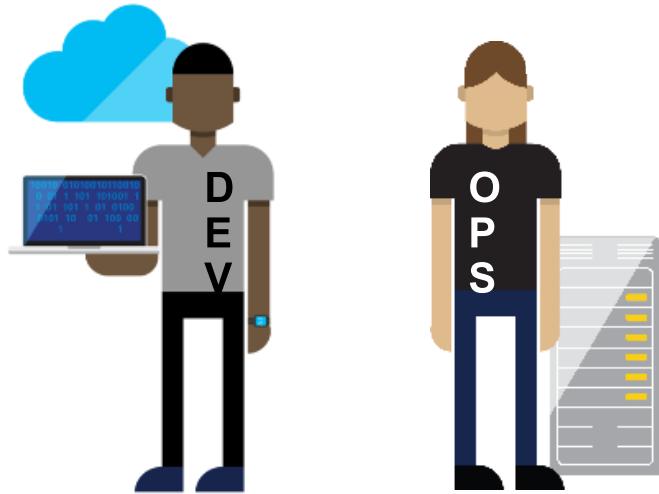
# Como era antes do DevOps?



# DevOps

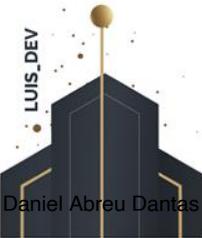


# DevOps



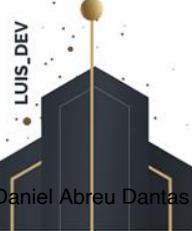
...fim!

1 Pessoa





# DevOps

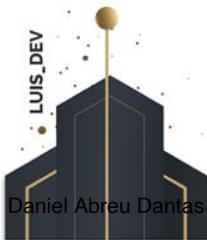




# Azure DevOps



- Automatização do build e release das aplicações
- Controle de versão
- Desenvolvimento ágil
- Gerenciamento de configuração
- Pequenas entregas de forma rápida
- Colaboração entre equipes





# Azure DevOps

**P**

## Project Settings

Projeto

- General
- Overview
- Teams
- Permissions
- Notifications
- Service hooks
- Dashboards

## Boards

- Project configuration
- Team configuration
- GitHub connections

## Pipelines

- Agent pools
- Parallel jobs
- Settings
- Test management
- Release retention
- Service connections
- XAML build services

## Repos

- Repositories

## Artifacts

- Storage

## Project details

Name  
Projetos

Description

Process  
Basic

Visibility  
 Private

This determines who can view this project. [Learn more about project visibility.](#)

Save

## Project administrators

Henrique Mauri  
henrique@dotcode.com.br

Add administrator

## Azure DevOps services

Boards  
Flexible agile planning with boards and cross-product issues

On

**P**



# Azure DevOps

Tasks Variables Triggers Options Retention History | Save & queue Discard Summary Queue ...

Pipeline [...  
Build pipeline](#)

Get sources [...  
service-backoffice develop](#)

Agent job 1 [...  
Run on agent](#) +

Restore [...  
.NET Core](#)

Build [...  
.NET Core](#)

Publish [...  
.NET Core](#)

Publish Artifact [...  
Publish build artifacts](#)

Add tasks | Refresh [Search](#)

All Build Utility Test Package Deploy Tool Marketplace

- [Azure Key Vault  
Download Azure Key Vault secrets](#)
- [Azure Monitor alerts \(Deprecated\)  
Configure alerts on available metrics for an Azure resource \(Deprecated\)](#)
- [Azure PowerShell  
Run a PowerShell script within an Azure environment](#)
- [Azure resource group deployment  
Deploy an Azure Resource Manager \(ARM\) template to a resource group and manage virtual machines](#)
- [Azure SQL Database deployment  
Deploy an Azure SQL Database using DACPAC or run scripts using SQLCMD](#)
- [Azure VM scale set deployment](#)

LUIS\_DEV



# Azure DevOps

Pipeline Tasks Variables Retention Options History

DEV

Deployment process

Run on agent

Run on agent

Deploy Azure App Service to Slot

Azure App Service deploy

PowerShell Script

Disabled: PowerShell



Add tasks



All Build Utility Test Package Deploy Tool Marketplace

.NET Core

Build, test, package, or publish a dotnet application, or run a custom dotnet command

Android signing

Sign and align Android APK files

Ant

Build with Apache Ant

App Center distribute

Distribute app builds to testers and users via Visual Studio App Center

App Center test

Test app packages with Visual Studio App Center

Archive files

Compress files into .7z, .tar.gz, or .zip

LUIS\_DEV



# Azure DevOps

## Extensions for Azure DevOps

Search Azure DevOps extensions



### Featured

Retrospectives

Microsoft DevLabs 11.3K FREE

★★★★★

Timetracker

7pace 11.2K FREE TRIAL

★★★★★

Azure Cost Insights

Kees Schollaart 2.2K FREE

★★★★★

Code Quality NDepend

ndepend 1.2K FREE TRIAL

★★★★★

Bravo Notes

Agile Extensions 419 FREE TRIAL

★★★★★

Azure Boards Slack app

Microsoft 26 FREE

★★★★★

### Most Popular

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Microsoft 126K FREE

★★★★★

Azure DevOps Open in Microsoft Teams

Microsoft DevLabs 79.9K FREE

★★★★★

Analytics

Microsoft 34.2K FREE TRIAL

★★★★★

SonarQube

SonarSource 34K FREE

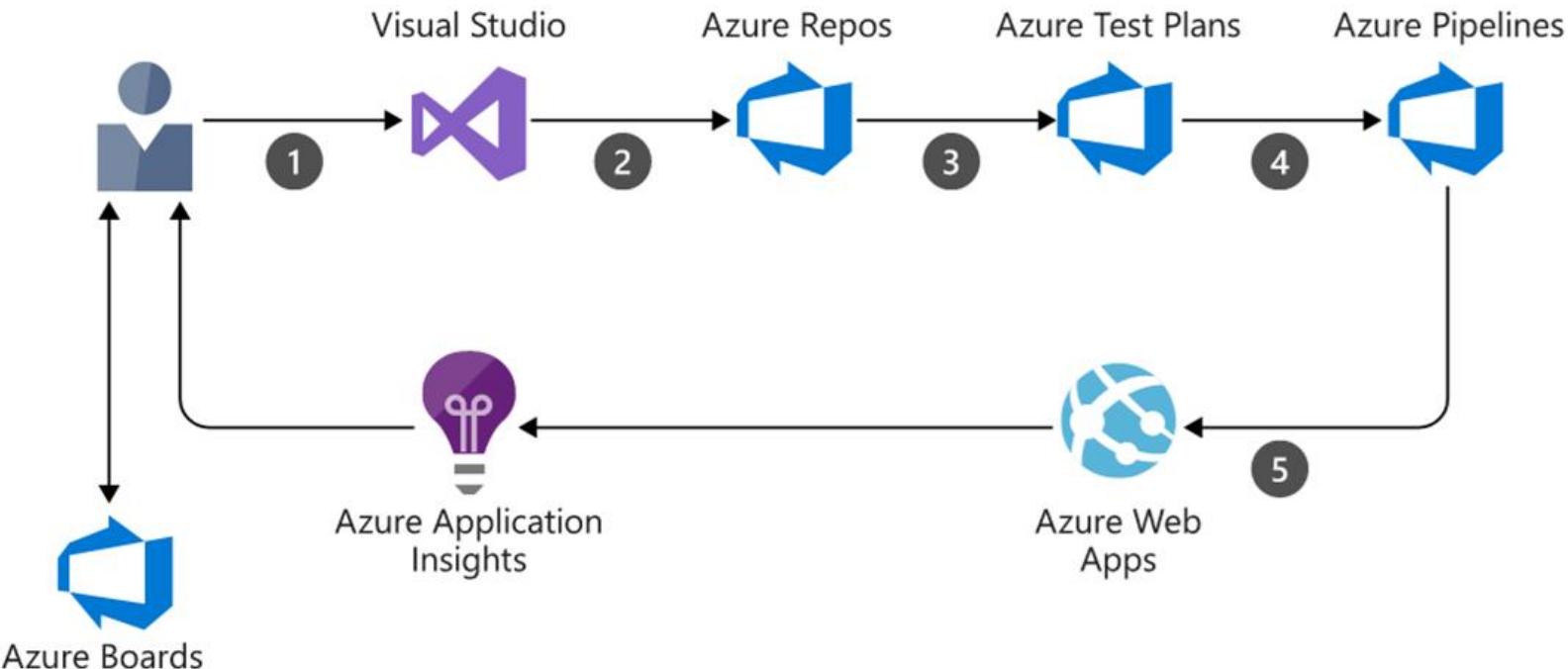
★★★★★

Slack Integration

Microsoft 31.5K FREE

★★★★★

# Azure DevOps



**GitHub**

**JetBRAINS**  
Develop with pleasure!

**LeanKit**

**AppVeyor**

**slack**

**Octopus Deploy** ft

**AZUQUA**

**myget**

**SOASTA**



**Jenkins**



**HipChat**

**MODERN Requirements**  
By eDevTECH

**Tasktop**

**Aha!**

**Trello**

**dynatrace**

**zendesk**

## Visual Studio Partners and Extensions

**65**

Visual Studio Code  
Extensions

**5,910**

Visual Studio  
Gallery Extensions

**90**

Visual Studio  
Sim-Ship Partners

**48**

VS Team Services  
Extensions

**IncrediBuild**  
BEYOND ACCELERATION

**CloudBees**

**zapier**

**uservoice**

**flowdock**

**bamboo**  
solutions

**VS Anywhere**

**Xamarin**

**macincloud**

**jamo** solutions

**perfecto**  
mobile

**redgate**  
ingeniously simple

**PreEmptive Solutions**

**CHEF**



**Campfire™**

**submain**   
**sauce LABS**

**OpsHub**  
Enabling Agile Integration



# E porque utilizar containers?



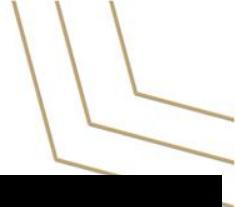
# Containers



- Mesmas expectativas de ambiente
- Substituição das limitações da plataforma
- Melhor desempenho (implante apenas o que você precisa)
- Entrega mais rápida aos clientes



# Hospedagem tradicional de aplicações



Physical Server (Host OS)

Hypervisor

VM 1

Windows OS

App 1

VM 1

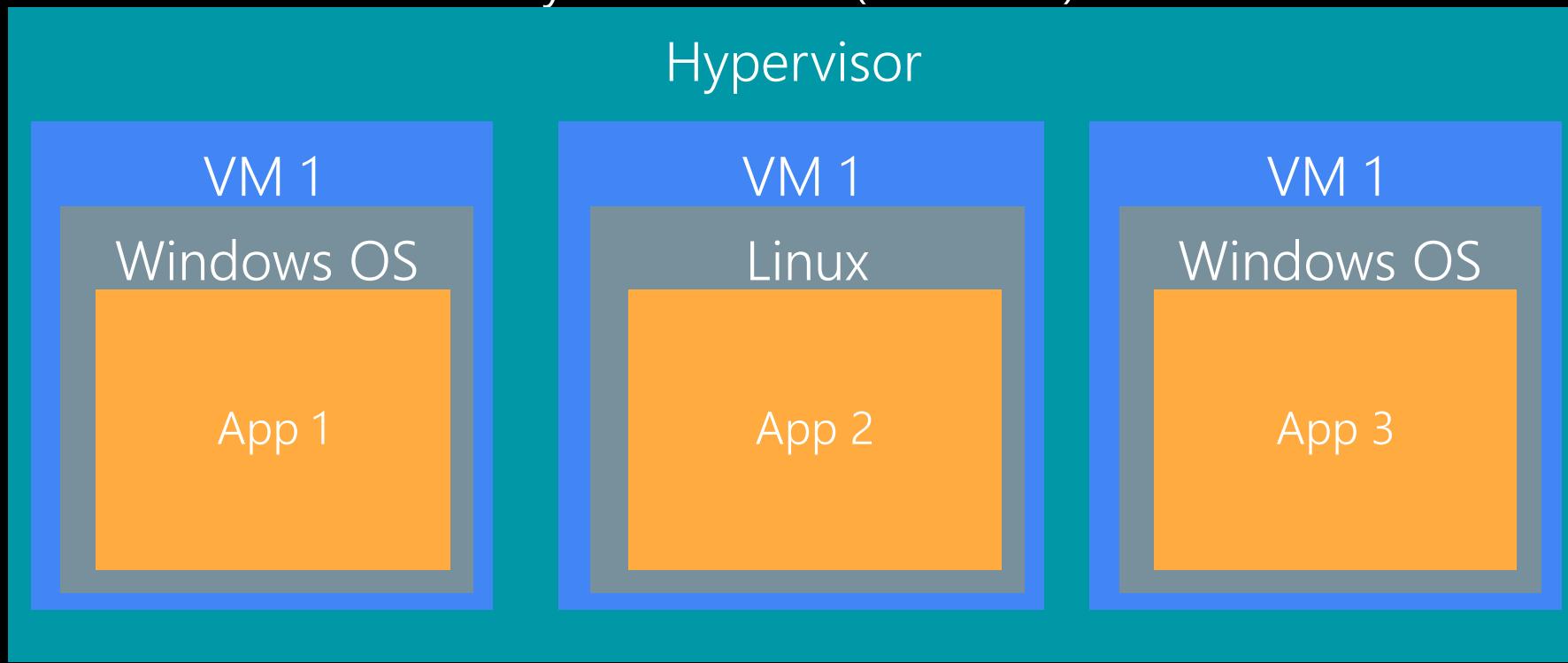
Linux

App 2

VM 1

Windows OS

App 3



# Hospedagem em Containers (Docker)

Physical Server (Host OS)

Hypervisor

VM 1

Windows OS

Docker Engine

App 1

App 2

App 3

App 4

VM 1

Linux

Docker Engine

App 5

App 6

App 7

App 8

VM 1

Windows OS

Docker Engine

App 9

App 10

App 11

App 12

# Containers no Azure



Azure App Service



Azure Service Fabric



Azure Container Registry



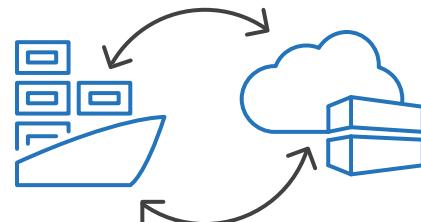
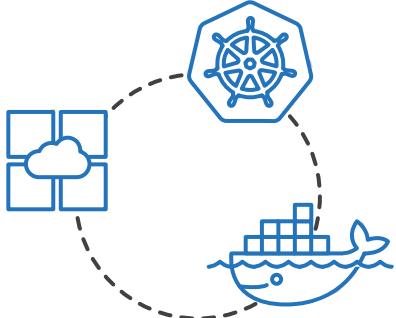
Azure Container Service





# E o que é Azure Container Registry?

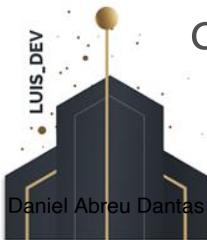
# Azure Container Registry



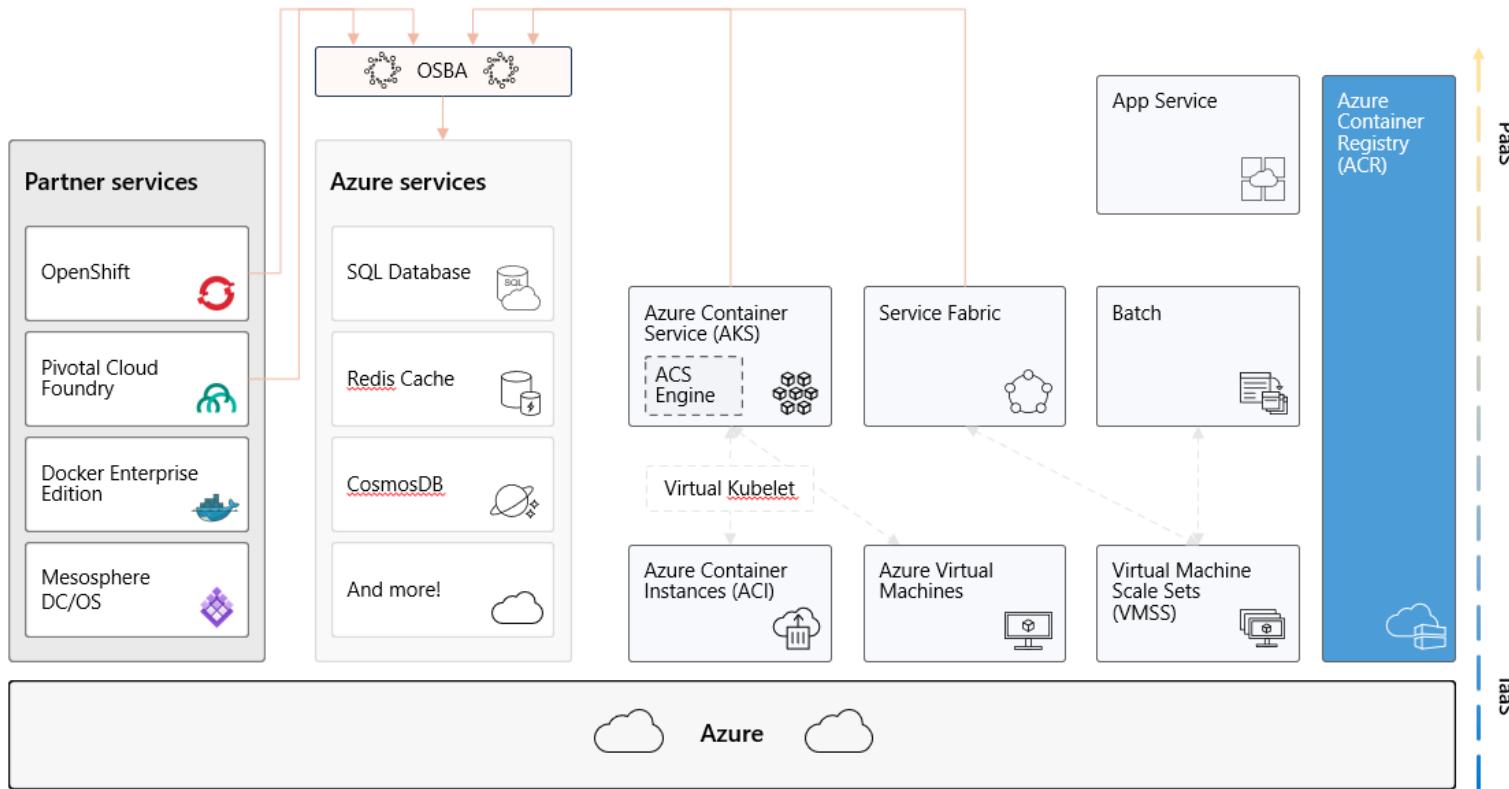
Gerencie imagens para  
todos os tipos de  
containers

Use ferramentas  
familiares do Docker  
CLI de código aberto

Replicação geográfica  
dos containers do Azure

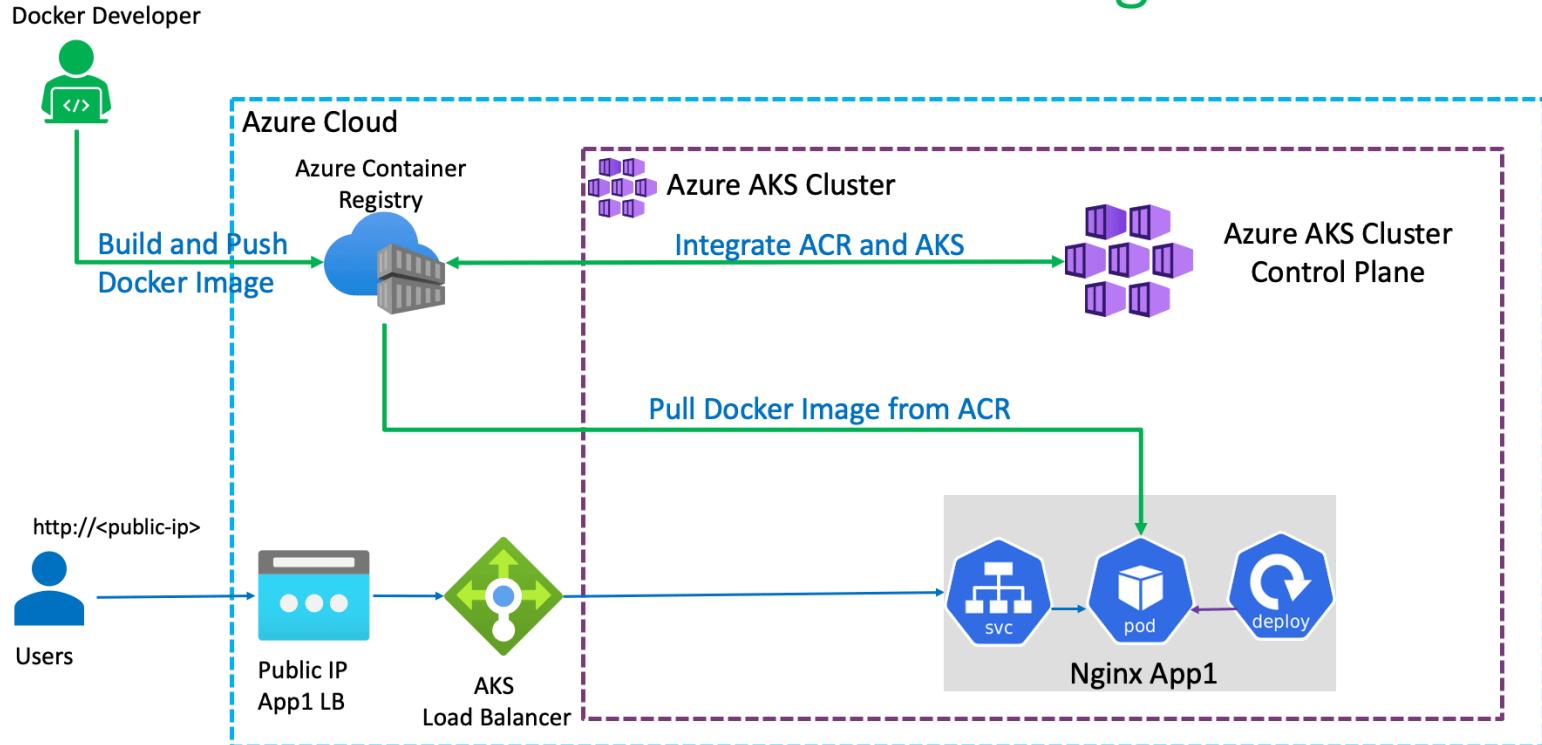


# Azure Container Registry

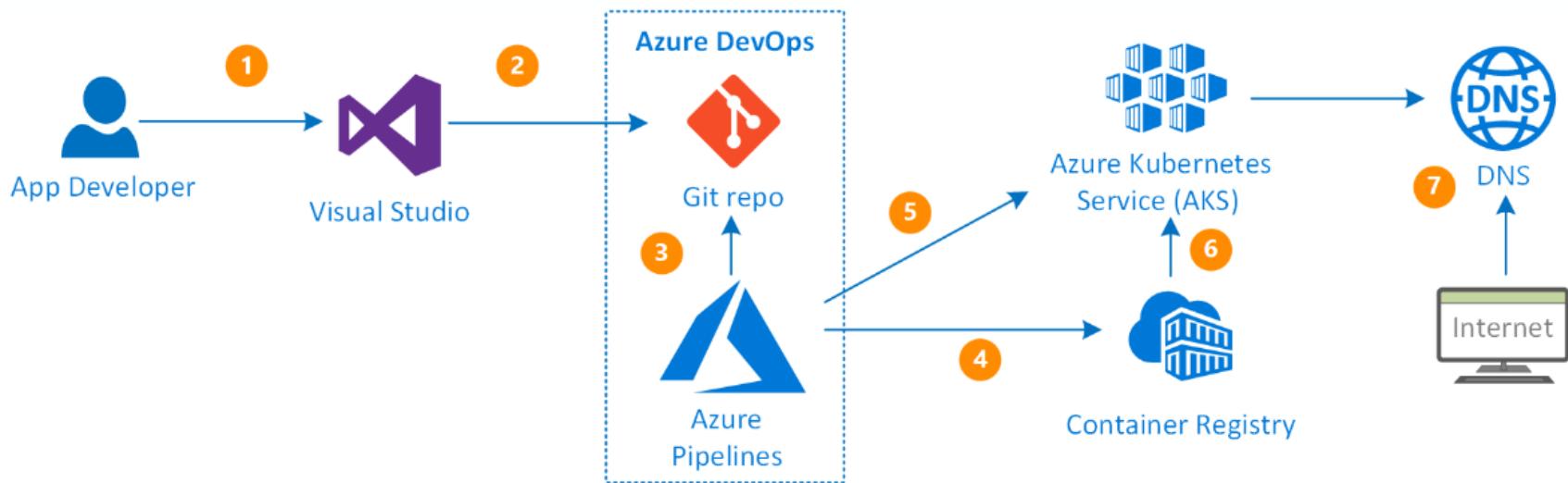


# Azure Container Registry

## Azure ACR and AKS - Integration



# Azure Container Registry





# Azure Container Registry

```
$ az acr create --resource-group myResourceGroup --name myContainerRegistry --sku Basic
```

## Comandos

```
$ az acr login -n myacr
```

```
$ docker pull myacr.azurecr.io/hello-world
```

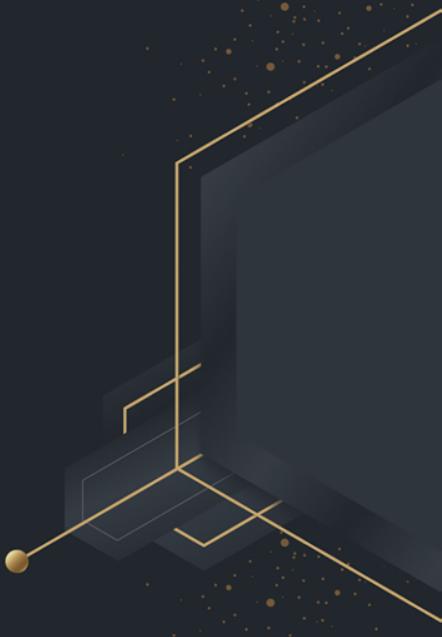
```
$ docker push myacr.azurecr.io/hello-world
```

```
$ docker rmi myacr.azurecr.io/hello-world
```



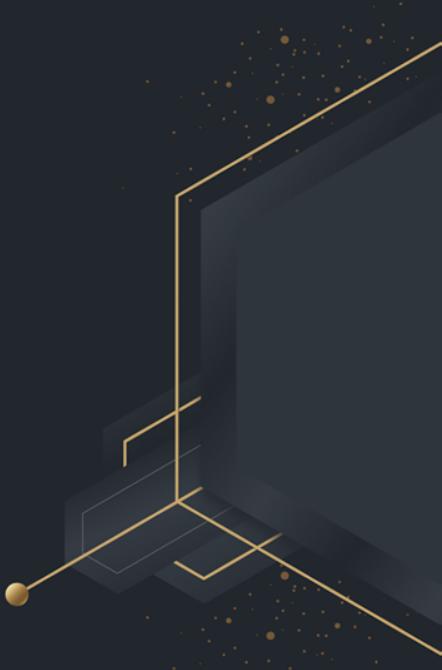


# Demo





# Observabilidade com Elastic APM





# E o que significa “APM”?



- Monitoramento de desempenho de aplicações
- Monitoramento e logs de erros, alertas e informações
- Análise da infraestrutura
- Análise e auditoria das transações comerciais
- Experiência do usuário final



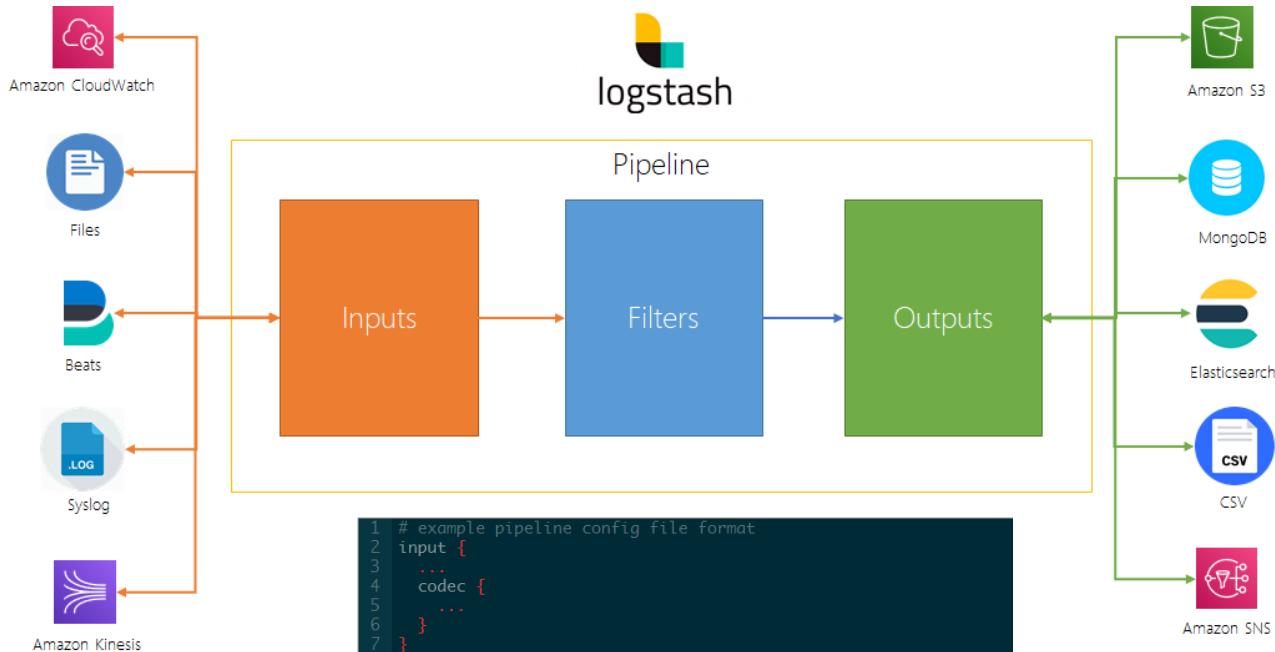
# Elastic Stack



- **Elasticsearch:** Mecanismo de pesquisa RESTful distribuído responsável pelo armazenamento de documentos (JSON) com especialidade em busca Full-text.
- **Logstash:** Componente de processamento de dados do Elastic Stack que recebe, transforma e envia dados para o Elasticsearch.



# Elastic Stack

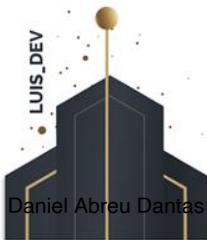


```
1 # example pipeline config file format
2 input {
3     ...
4     codec {
5         ...
6     }
7 }
8 filter {
9     ...
10 }
11 output {
12     ...
13     codec {
14         ...
15     }
16 }
```

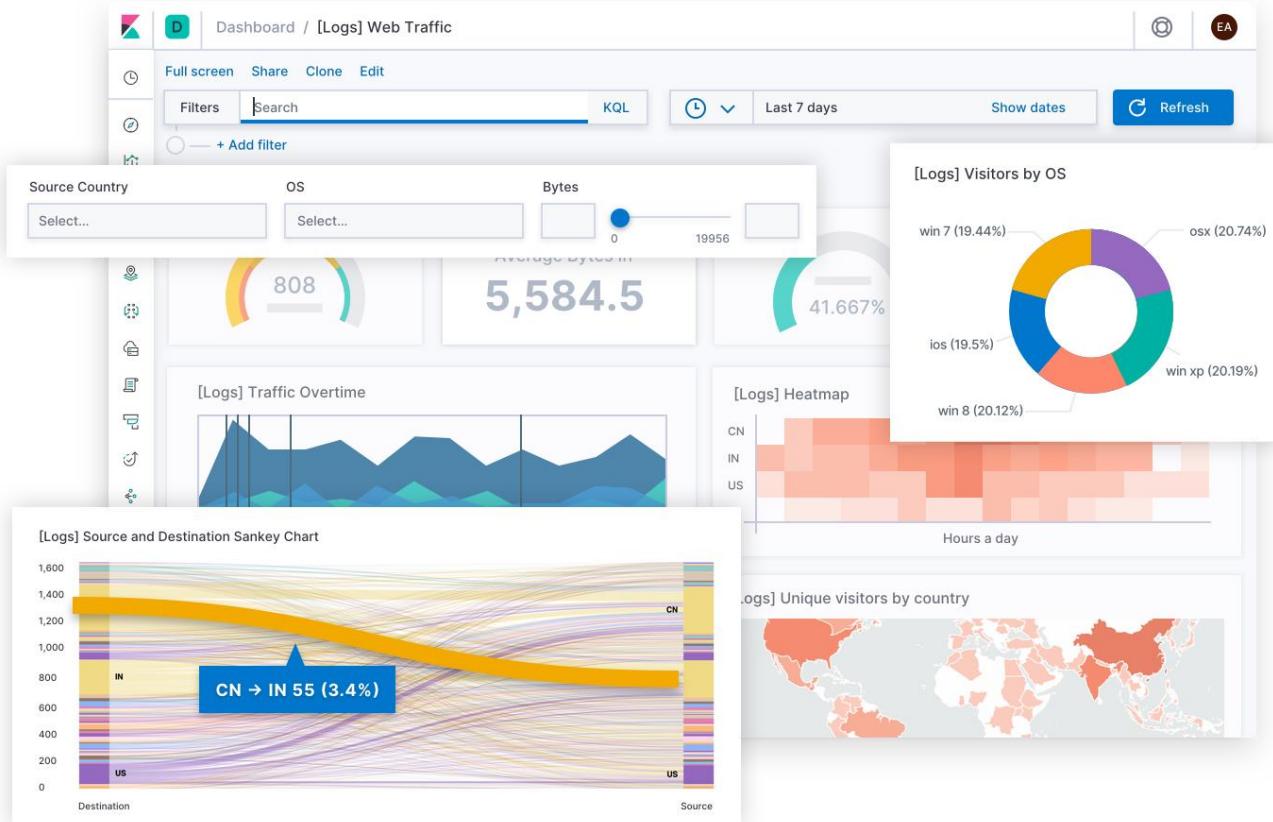
# Elastic Stack



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- **Logstash:** Componente de processamento de dados do Elastic Stack que recebe, transforma e envia dados para o Elasticsearch.
- **Kibana:** Interface web para pesquisa, criação e visualização de gráficos/dashboards (Canvas) e configuração de alertas.



# Elastic Stack



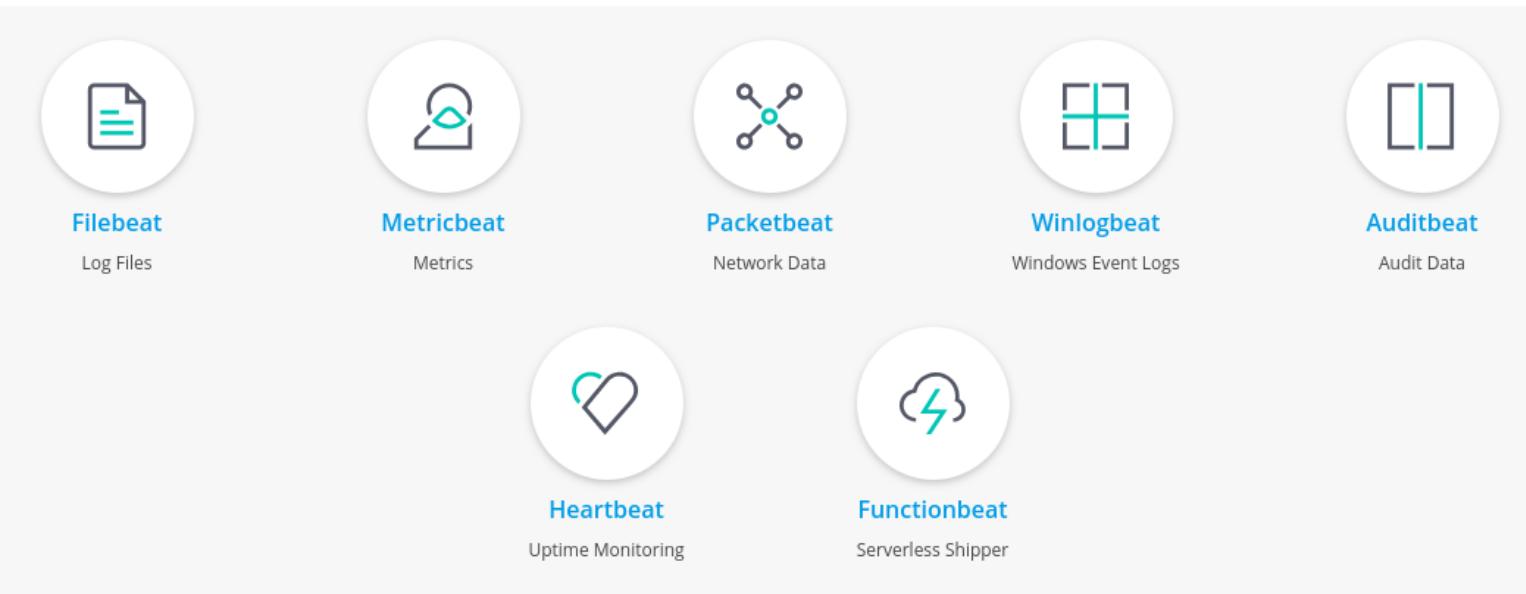
# Elastic Stack



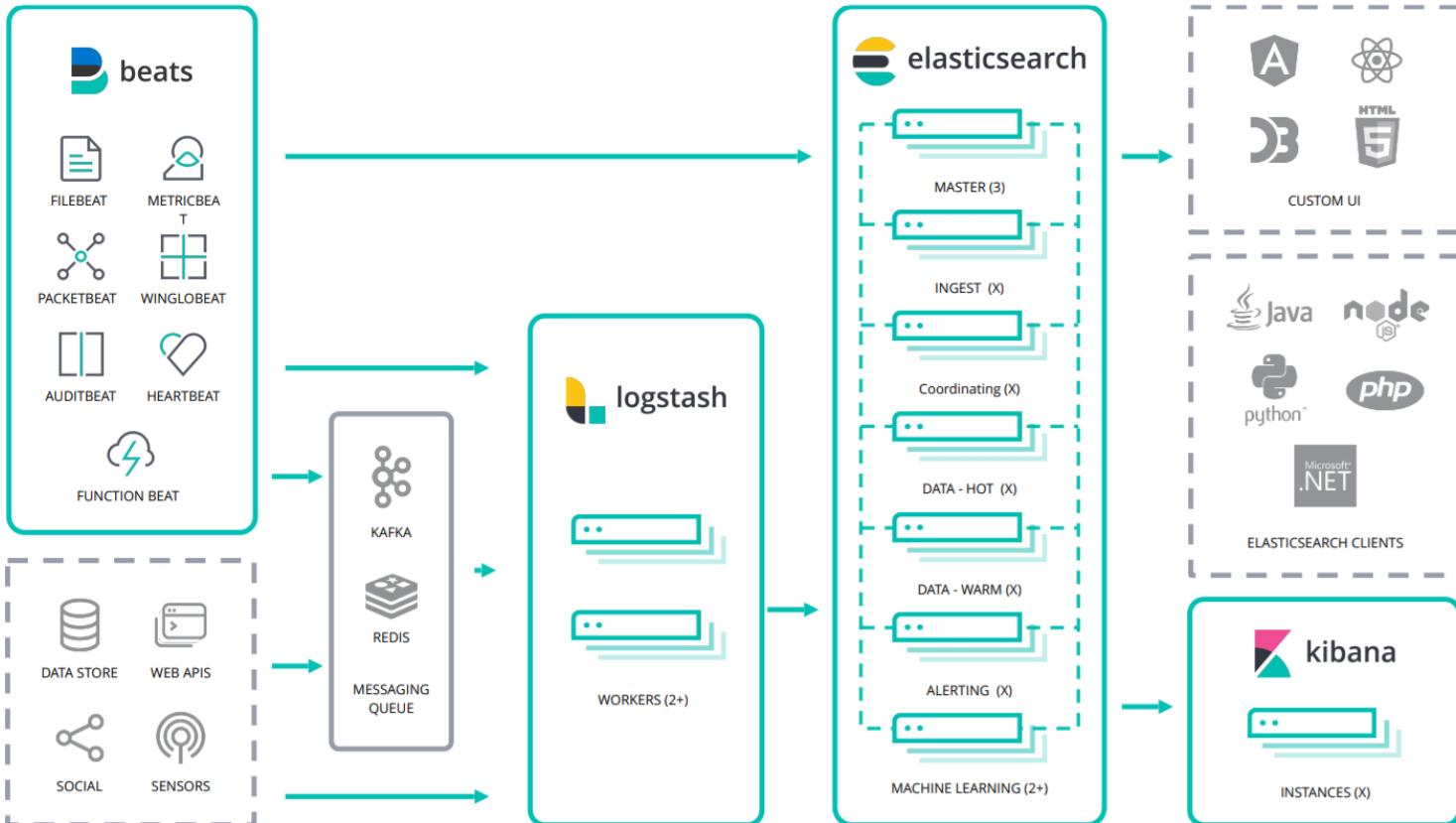
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- **Logstash:** Componente de processamento de dados do Elastic Stack que recebe, transforma e envia dados para o Elasticsearch.
- **Kibana:** Interface web para pesquisa, criação e visualização de gráficos/dashboards (Canvas) e configuração de alertas.
- **Beats:** Plugs de dados leves e de propósito único que podem enviar dados de centenas ou milhares de máquinas para o Logstash ou para o Elasticsearch.



# Elastic Stack



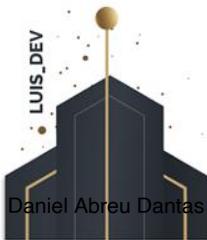
# Elastic Stack



# Elasticsearch



- Banco de dados não relacional e orientado a documentos
- Armazena / busca / analisa grandes volumes quase que em tempo real
- De novo: É extremamente rápido
- Escalável horizontalmente
- API Rest



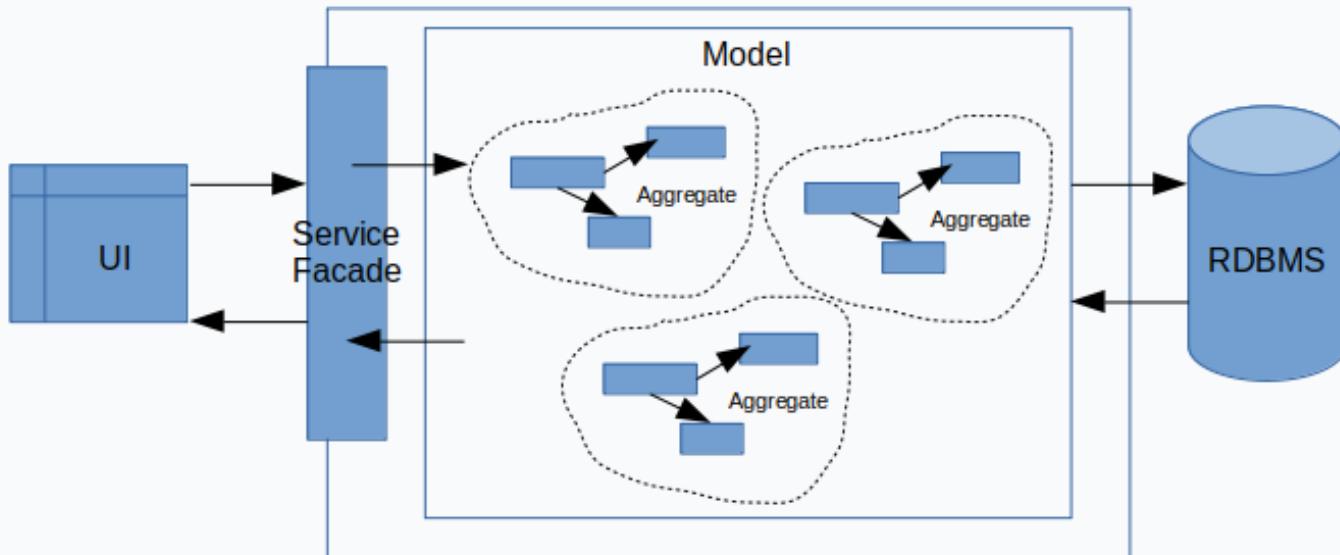
# Quando utilizar o Elasticsearch?



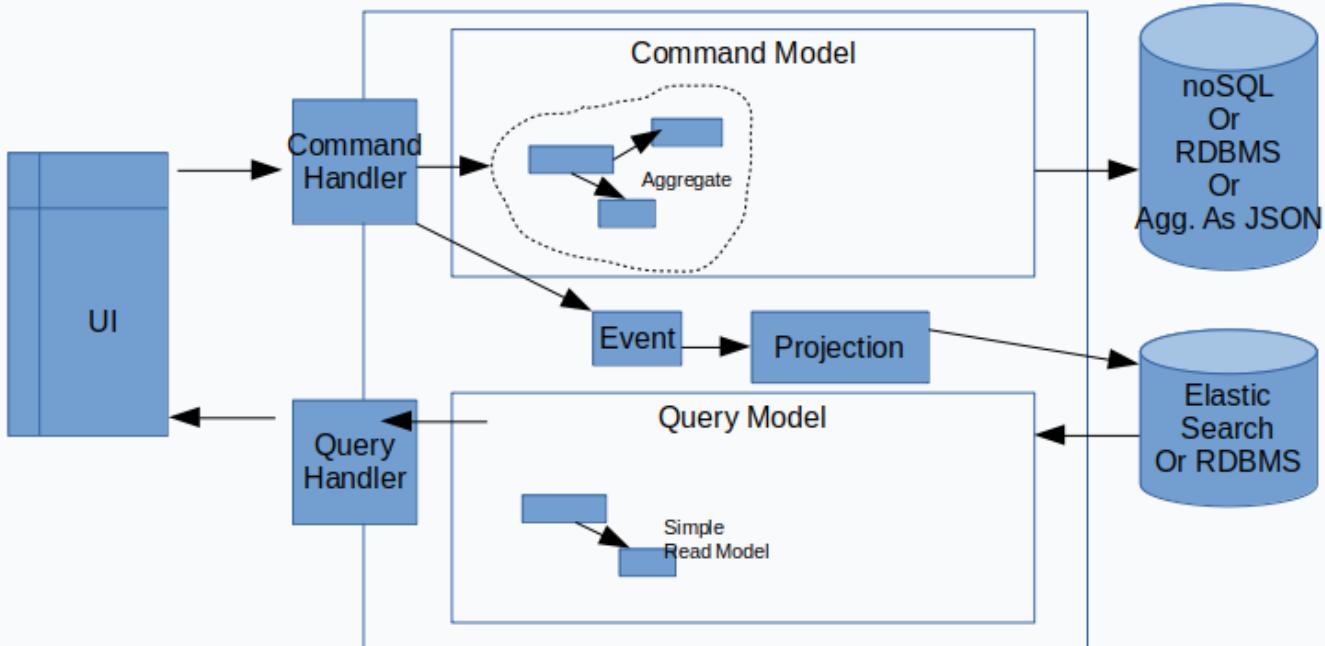
- Aumentar a velocidade de resposta em buscas textuais
- Relevância de resultados
- Busca com geolocalização
- Centralização dos logs
- Isolar o banco transacional
- Trabalhar com CQRS



# Quando utilizar o Elasticsearch?



# Quando utilizar o Elasticsearch?





# Quando não utilizar o Elasticsearch?



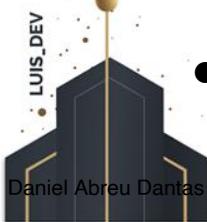
- Ambientes com alta escrita de dados
- Operações transacionais
- Fonte primária de armazenamento



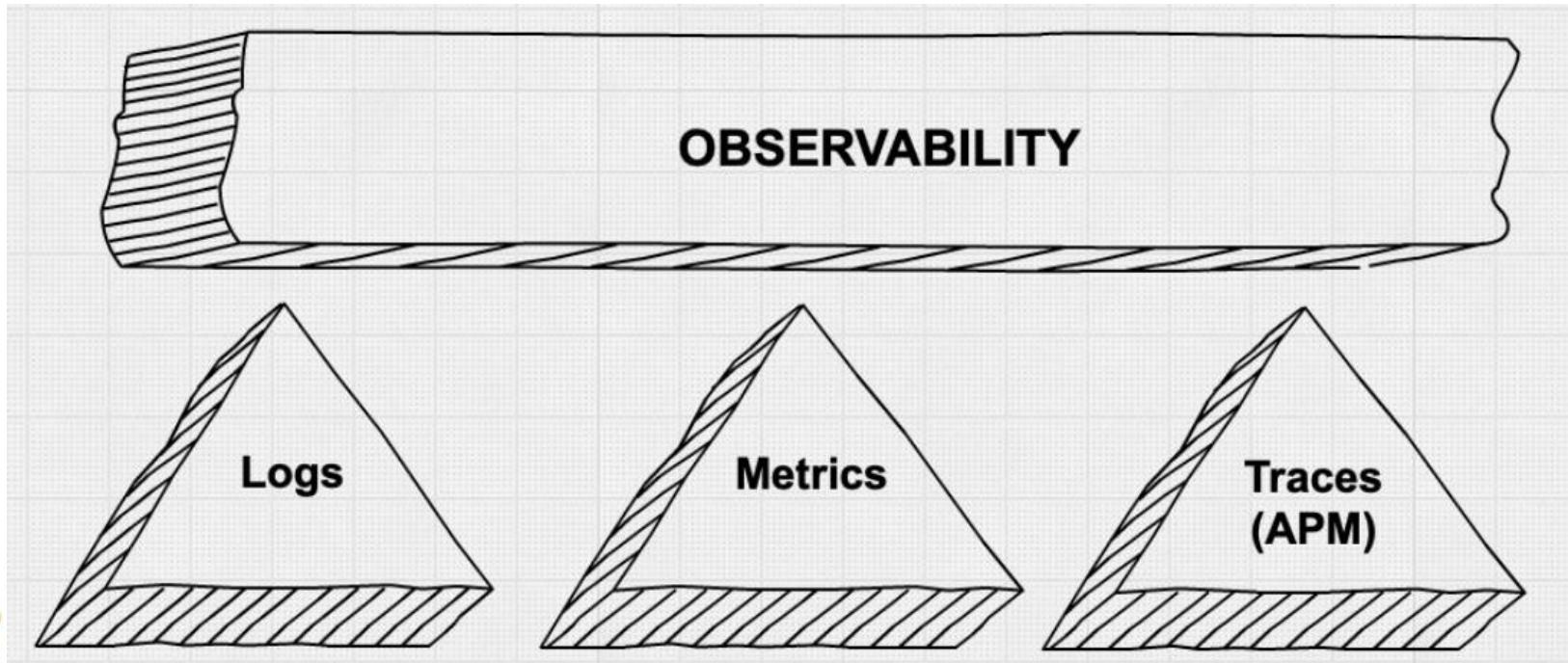
# Elastic APM



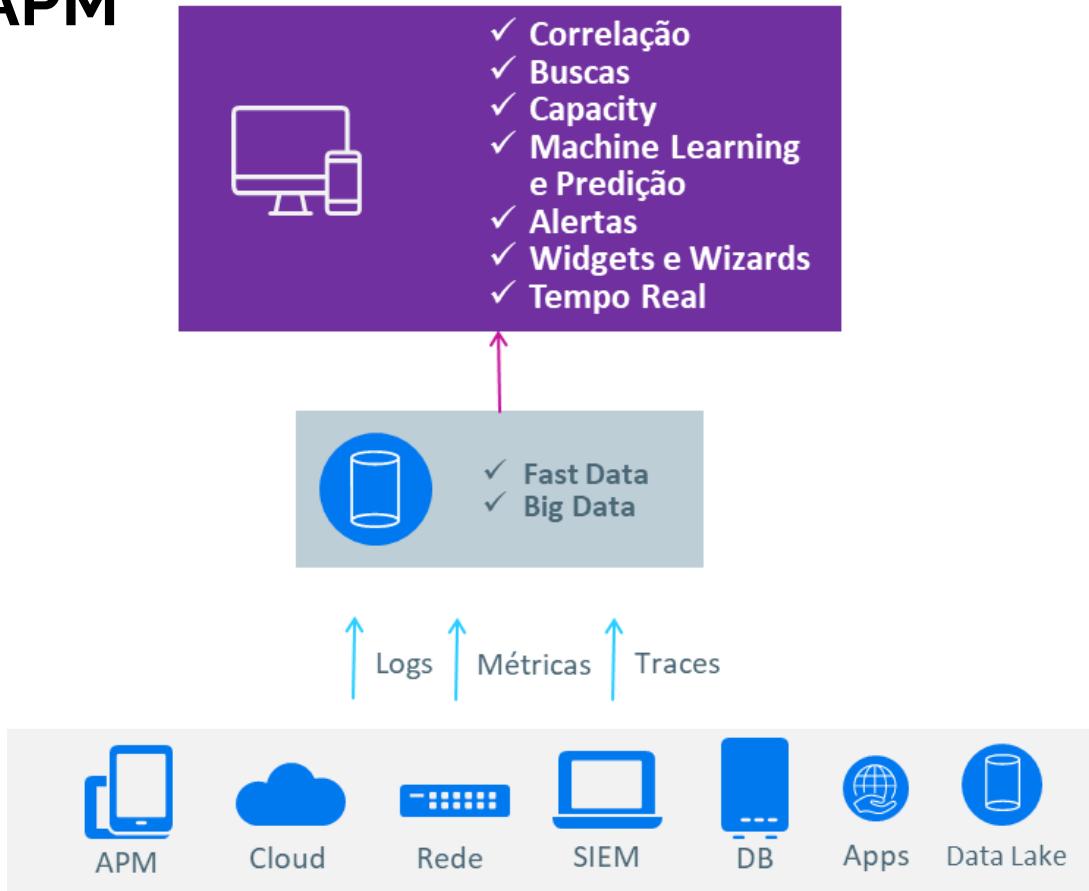
- Monitora o comportamento de todas aplicações de forma transparente
  - Monitora os acessos externos das sua aplicação (SQL, Redis, Elasticsearch, APIs de terceiros...)
  - Criação de alertas com base em métricas
- 
- **Log** – Registro textual de eventos que ocorrem no sistema (Elastic Stack, Loki, GreyLog)
  - **Métrica** – Representação numérica baseado em uma linha do tempo (Elastic Stack , New Relic, Data Dog)
  - **Trace** – Rastreamento de todo fluxo de uma requisição, correlação entre as requisições (Elastic Stack, Jaeger, Grafana)



# Elastic APM

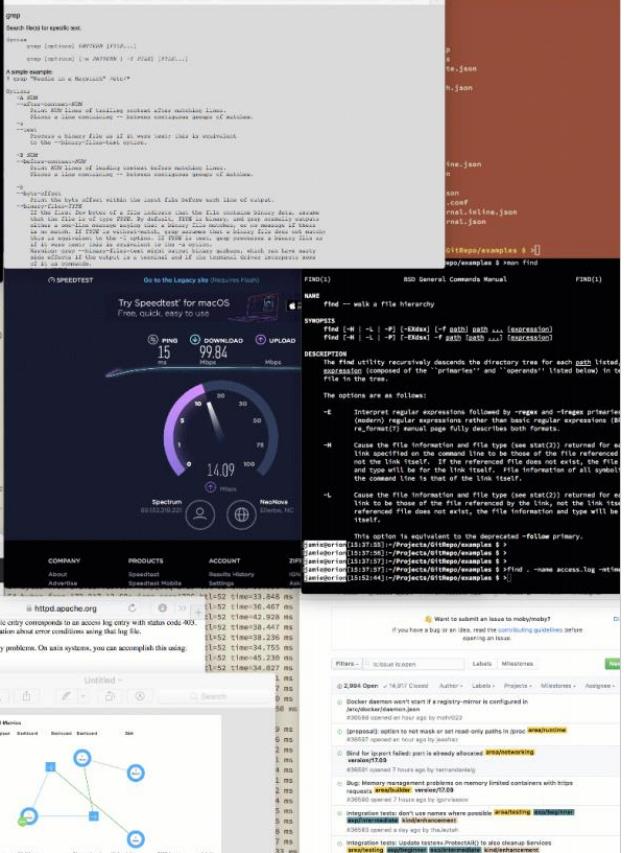
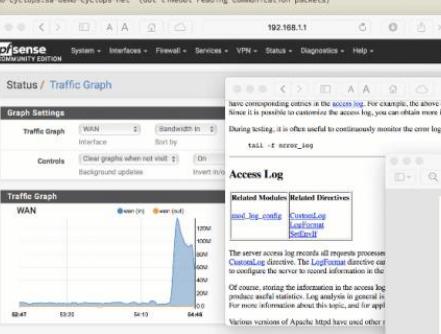


# Elastic APM



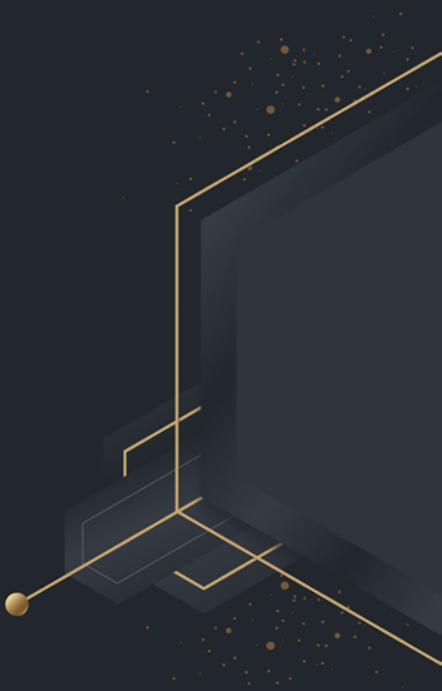


# Elastic APM





# Demo





# Pontos de atenção



- Segurança na API Elasticsearch (Cloudflare, OWASP, WAF...)
- Controle de acessos e permissões de usuários
- <https://sematext.com/blog/elasticsearch-security-authentication-encryption-backup>
- Analise sua aplicação / elasticsearch no <https://shodan.io>





# Estudos



- <https://www.elastic.co/guide/en/apm/agent/dotnet>
- <https://www.elastic.co/guide>
- <https://discuss.elastic.co>
- <https://contributor-program.app.elstc.co>
- <https://www.youtube.com/c/eduardoneves>



# Estudos

